

## SURGERY

### Pharyngeal Diverticula\*

Malcolm R. MacCharles, M.D.

Assistant Professor of Surgery,

University of Manitoba Faculty of Medicine;

Surgeon, Winnipeg General Hospital

Pharyngeal diverticula are rather uncommon. In our Hospital of 650 beds only nine cases have appeared in the last five years. Therefore the disease is not important because of its frequency. However, the symptoms are very distressing. The diagnosis is relatively easy; and the treatment, while not simple, is very satisfactory. All these things make it essential that general surgeons have a working knowledge of the condition.

#### Incidence

Diverticula occur in almost every segment of the alimentary tract, being exceedingly common in the sigmoid, fairly common in the duodenum, rare in the stomach, and very uncommon in the esophagus and also in the pharynx.

The age incidence of diverticula of the pharynx is late. Of the five cases that we have seen and operated on in the last three years, the youngest was 54. Four were males and one a female.

Diverticulum of the pharynx occurs in only one site—on the posterior wall in the middle line, very low down. According to Wilkie a natural weak spot is present in this area between the fibres of the inferior and middle constrictor. Due to abnormally high pressure within the pharynx (probably due to some degree of inco-ordination in the swallowing mechanism) this weak spot gradually gives way and the mucosa is pushed out through the muscular layers in much the same way as the sac is formed in an indirect inguinal hernia.

The diverticulum consists of a layer of mucosa which is covered by strands of muscular fibres prolonged on to it as it emerges from the pharynx. It is also covered by a thin layer of cellular tissue. The mouth of the diverticulum remains small for a long time while the diverticulum grows in length and breadth. As it grows it extends downward into the neck in the midline behind the esophagus, but may slip over to one side or the other—most frequently the left side.

The diverticulum may attain a very large size and of course its size varies with the amount of

the contents. When fluids or solids are taken and pass into the diverticulum it becomes distended. When they are evacuated it collapses. When it is distended by food or fluids it may cause a noticeable swelling on the side of the neck which will disappear when the diverticulum empties.

Food may lodge in the diverticulum for prolonged periods. One of our patients who was taking vitamin pills said he could taste them for several days.

When stagnation occurs in diverticula elsewhere in the alimentary tract it is usually accompanied by peridiverticulitis. So far as our experience is concerned this never occurs in pharyngeal diverticula.

As the diverticulum attains considerable size the mouth of the diverticulum also enlarges. This it does at the expense of the upper esophageal opening and this may progress to such a degree that the esophageal opening may be occluded completely—partly by pressure of the diverticulum and partly because the esophageal opening is becoming narrowed. When the diverticulum has enlarged to a moderate degree all fluids or foods that are swallowed go at once into the diverticulum and when it is full the overflow spills into the esophagus (possibly not enough to sustain proper nourishment and the patient therefore loses weight through starvation)—and also frequently into the trachea causing marked coughing and choking spells; and thirdly, back into the mouth to be expectorated.

#### Symptoms

The symptoms then of pharyngeal diverticulum are:

- (1) Difficulty in swallowing.
- (2) Loss of weight.
- (3) Swelling in the neck.

The patient has a sensation of food sticking in his throat. This may be mild for a long time but will gradually increase. As the diverticulum becomes large enough to hold a respectable quantity of food the patient usually learns from his own experience that he gets along better with fluids than with solids. But he cannot exist on fluids alone and he makes up for this by prolonged mastication of solid foods until they are liquid. This is readily demonstrated by giving a patient some bread and asking him to eat it. He may sit and chew for as long as ten minutes before trying to

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swallow. By prolonged mastication the solid food is converted to liquid and swallowing made easier.

Many of these patients will complain that saliva gathers in the diverticulum overnight and they have to take a drink of water in the morning and then bring it up to clear out their diverticulum before they can take their breakfast.

Loss of weight is a rather late symptom but may be so marked that a presumptive diagnosis of malignancy may be made until the X-ray demonstrates the diverticulum.

### Diagnosis

The diagnosis can usually be made in the well-marked cases from the history and physical examination; but may only be suspected in the early stages. There is no other disease in which a patient will spend so long masticating his food. The only lesion that pharyngeal diverticulum can be mistaken for is a diverticulum of the upper part of the esophagus, which is rather rare.

Some of these patients will have observed a swelling in their neck and have found that by pressing on this swelling they can empty the diverticulum. This, of course, establishes the diagnosis. There are cases in which the diverticulum may be very large and still not cause any visible swelling in the neck.

The simplest way to demonstrate the diverticulum is by X-ray. The patient swallows barium which can be seen to enter the diverticulum, fill it up and then overflow into the esophagus. The outlines of the diverticulum are very sharp and very smooth. The mouth of the diverticulum is at the level of the cricoid cartilage and an anterior, oblique, or lateral view usually shows it up very readily. The diverticulum usually retains the barium for a long time and it is readily seen either under the fluoroscope or on the films.

### Treatment

Some of these patients have had their symptoms for quite a long time, and if they are not marked or if they are not progressive they may be able to get along for indefinite periods without treatment. Usually, however, the symptoms are progressive and their difficulties are increasing and they want to be rid of them. Surgical removal of the diverticulum is then indicated.

The operation is not hazardous, not difficult, and the results are usually satisfactory. In the days when infection was a major problem the operation was usually done in two stages—isolation of the diverticulum and securing it in the upper end of the wound constituting the first stage; removal of the diverticulum the second stage. This was usually done a week or ten days later, when the fascial planes of the neck had

become sealed off. With the advent of the sulpha drugs and penicillin surgeons have almost unanimously adopted the one-stage operation.

In addition to the usual surgical team of surgeon, assistant, anaesthetist and scrub nurse we have the help of an endoscopist, and have found him invaluable. With Pentathol and Cyclopropane anaesthesia and an intra-tracheal tube in place, an incision is made along the anterior border of the left sterno-mastoid through the skin and platysma. The space between the carotid sheath on the lateral side and the larynx and thyroid gland on the medial side is entered and the separation is carried backwards until the anterior surface of the cervical vertebrae is reached. The omohyoid muscle and inferior thyroid artery may restrict the access and may have to be divided; but this is not always necessary.

The larynx and esophagus are displaced medially and the diverticulum is readily found in the loose cellular tissue behind them. It is collapsed, and when small may not be very obvious. It is readily freed from the surrounding areolar tissue and dissected up until it is attached only by its origin to the posterior wall of the pharynx.

We have found difficulty in determining where the esophageal wall ends and diverticulum begins. At this stage the endoscopist passes his 'scope and can usually see the mouth of the diverticulum and the esophageal orifice. He passes a rather stout Levine tube through the esophagus down into the stomach and draws the upper end out through the nose. The Levine tube in the esophagus defines that structure very readily for the surgeon and he can then better identify the actual origin of the diverticulum.

Having done this the fascia and muscular fibres overlying the origin of the diverticulum are divided until mucosa is reached. The mucosa is then divided and either sutured with interrupted sutures if large, or ligated if small; and the diverticulum removed. The area is then swabbed with alcohol and the muscular fibres surrounding the wound are sutured over it in another layer. Then a Penrose drain is left into the depths of the wound and the wound closed.

The Levine tube is left in place and the patient fed through it for the next ten days or more—swallowing being allowed. Supplementary feeding may be given intravenously. After the tenth day the tube is removed and the patient begins swallowing fluids first, gradually shifting to solids, and later to ordinary foods.

This procedure has been carried out in four of the five cases we have done with entire satisfaction. The fifth case happened to be an extremely nervous and apprehensive individual with

vomited up the tube the first night. The House Surgeon attempted to re-insert it; and either due to his efforts or to the evasive efforts of the patient, the suture line gave way and the wound became contaminated with saliva and, of course, became grossly infected. An esophageal fistula was thereby established, which persisted for several months.

This also gave rise to a mediastinitis on the opposite side to the original incision but which drained satisfactorily by opening up the original wound. He also developed an infection in the upper lobe of his right lung which at one time looked as if it was going to abscess formation; but which was successfully treated by the bronchoscopist. Eventually the sinus in the neck closed but his symptoms returned and he now has another diverticulum and is trying to re-summon his courage to have it operated on. We feel confident that had we not had the help of sulpha drugs and penicillin and expert care from our bronchoscopist that the results would have been disastrous.

The other four cases made an uneventful re-

covery and are completely free of their symptoms.

In the sixth case (a female, 38 years of age) which we operated on with a diagnosis of pharyngeal diverticulum, we were unable to find the diverticulum. The endoscopist again came to our rescue and passed his 'scope into what turned out to be a diverticulum of the esophagus just below the upper orifice. This demonstrated in our operative wound that the diverticulum was in the esophagus and not in the pharynx. It was short, wide-mouthed, and not suitable for surgical treatment so the wound was closed and nothing further done. Naturally, this patient has not improved.

### Summary

The disease is rather uncommon, the diagnosis is simple, the treatment is not too difficult; and it is very satisfactory. A one-stage operation with the assistance of an endoscopist is recommended. An indwelling Levine tube has been found satisfactory. If the sutures in the pharyngeal wall give way infection is a serious hazard.

## GYNECOLOGY

### Abstract

**Leukoplakia Vulvae.** Its Etiology and Results of Treatment with Vitamin A. M. N. Hyam, M.D., F.A.C.S. O. H. Blooms, M.D., F.A.C.S. American Journal of Obstetrics and Gynaecology, February, 1947.

The authors report a series of 18 patients, in all of whom the diagnosis of leukoplakia vulvae was verified by histologic examination. Each patient was subjected to a complete physical examination and checked by laboratory tests, which included complete assays of blood and urine for vitamin and hormonal levels as well as regular blood and metabolic chemistry.

All tests performed were negative from the diagnostic point of view, except the gastric content examination, which showed little or no free hydrochloric acid in 65% of the cases examined.

Cervical studies in other fields have demonstrated the relationship existing between gastric acidity and low plasma level of Vitamin A, e.g. Carcinoma of the stomach. The authors considered that in those of their cases with normal plasma levels of Vitamin A, leukoplakia vulvae is due to a subclinical deficiency of this vitamin.

Leukoplakia has been generally considered to be due to an estrin deficiency. The authors do not accept this as the cause, as in their experience the administration of estrin not only failed to relieve the local condition, but was followed by an aggravation of symptoms in all cases.

**Results:** Of the 18 patients treated, 14 have been relieved both objectively and subjectively. The four unimproved cases suffered from some constitutional disease—two were diabetic, one syphilitic, and one had cardio-renal vascular disease. These complications interfered in some way with the assimilation and utilization of Vitamin A.

**Therapy:** The daily oral dosage varied from 250,000 to 500,000 units Vitamin A, supplemented by injections of 50,000 units, twice daily. In addition, each patient received 15 minims of dilute hydro-chloric in water, three times daily with each meal. No other form of therapy was used. Results were checked subjectively and objectively by repeated examinations and biopsies. The former dry, indurated, glossy and wrinkled genitals became moist; the folds became fuller and the indurated skin again became pliable. Biopsies revealed marked alteration in the degree of acanthosis and keratinisation.

### Conclusions

1. Leukoplakia vulvae is of metabolic origin, due to a failure in utilization and/or absorption of Vitamin A.

2. Uncomplicated cases of minimal leukoplakia can be relieved with adequate doses of Vitamin A and dilute hydro-chloric acid.

In four years of observation, not one case showed a tendency toward vulvae carcinoma.

Dr. Leon Rubin.



## CARDIOLOGY

### Formation and Treatment of Edema In Chronic Congestive Failure

#### Review of Recent Literature

John Gemmell, M.D., M.R.C.P. (Lond)

In 1772 Sir George Baker wrote, "I much wish to see an indulgence . . . (of giving large amounts of water) . . . to poor, thirsty, dropsical patients. In making such an experiment, indulge the patient to the utmost extent. A limited permission may be pernicious." Despite this observation and others by the earlier physicians, as quoted by Schemm<sup>2</sup> the routine treatment of chronic congestive failure has been to "restrict fluids." Recently there have been several reports on the pathogenesis and treatment of edema in chronic congestive failure that vindicate the advice of the older clinicians.

The basic factor in heart failure is that the cardiac output is diminished<sup>3, 15</sup> and is inadequate for the needs of the body. The kidneys receive 25% of the cardiac output<sup>4</sup> and in the fact of diminishing cardiac output it is not surprising that renal blood flow is lessened. Merrill<sup>5</sup> has shown, using inulin and para-amino hippurate clearances, that the renal blood flow is decreased by 30% to 50% in chronic congestive failure. He has shown that there is a significant correlation between the reduction of cardiac output and reduction of renal blood flow. The renal blood flow was reduced to about one-fifth normal when the cardiac output was approximately one-half normal which suggests a specific diversion of the blood away from the kidney when the heart is failing<sup>6</sup>. In shock where there is inadequate output the renal blood flow and urinary output are diminished. Trueta<sup>7</sup> has suggested that this may be a factor in post-traumatic reflex anuria. Van Slyke<sup>8</sup> attributes this diversion of blood in shock to the fact that the kidney cells are relatively resistant to the ill-effects of anoxemia, so blood is diverted to tissues more susceptible to oxygen lack. This mechanism may well apply to the reduced renal flow in heart failure with reduced cardiac output and increased arteri-venous oxygen difference. Other observers confirm the reduced renal blood flow<sup>15</sup>.

In the course of Merrill's work, studies on sodium filtration, excretion and reabsorption were done. He concluded that the retention of sodium occurred due to low filtration rate with normal reabsorption. The reabsorption was related to the fundamental sodium conserving mechanism of the body. This results in the failure of excretion of normal amounts of sodium and its retention in the body of the patient in failure while on ordinary diet. Reaser and Burch<sup>6</sup> confirmed the above by

studies with radioactive sodium. While on ordinary diet, the patient with failure excreted only one ninetieth the amount of sodium as the control, and over the ten-week period of observation only 45% of the sodium was excreted by the patient with failure, as compared with 100% by the control.

In Schroeder's<sup>11</sup> cases the amount of sodium could be varied by the amount of ingested sodium chloride. If the sodium intake was increased, edema would appear after a variable period. In all cases reduction in sodium intake was followed by a loss of weight and edema fluid.

The retention of sodium over a long period of time results in a marked excess of sodium in body fluids. To maintain the sodium in solution in normal ionic balance water must be retained. The average normal diet may contain 5 grams of sodium chloride and if not more than 1 to 2 grams is excreted daily considerable sodium accumulates over a period of days. To keep 5 grams of a mixture of sodium chloride and sodium bicarbonate in a solution such as exists in interstitial fluid requires 1,000 ccs. of water. This is the equivalent of two pounds of edema fluid. Schemm emphasizes that this mixture of sodium chloride and sodium bicarbonate exists as an alkaline medium with a pH of 7.4. This "briny" mixture is composed of five parts sodium chloride to one part of sodium bicarbonate. Thus sodium retention over any period of time may result in clinical edema. The harmful effects of an increase in sodium chloride intake are apparently related to the degree of sodium retention rather than the increased intake as such<sup>12</sup>.

The "backward failure" theory ascribes edema formation to increase in venous pressure and hence increased capillary filtration pressure. If this is correct, we should expect venous pressure to increase before edema results and hemoconcentration to occur, as fluid is forced out of the capillaries. However, Warren and Stead<sup>13</sup> show that weight gain due to edema fluid precedes rise in venous pressure. This was not confirmed by Reichsman and Grant<sup>10</sup> who allowed patients to go into failure by stopping digitalis. They found that venous pressure increased before weight gain took place<sup>1</sup>. It has been shown on several occasions that hemodilution and increase in blood volume occurs in heart failure<sup>9, 14</sup>, rather than hemoconcentration.

The theory of "forward failure" due to sodium retention from decreased renal function may be briefly stated: In chronic congestive heart failure there is a reduced cardiac output and as a consequence a reduced renal blood flow, perhaps



specific diversion of blood from the kidney. As a result of reduced renal blood flow the sodium excretion is diminished and subsequent sodium retention if sodium intake is normal. A considerable quantity of water is necessary to maintain sodium in ionic balance and over a period of time fluid accumulates and clinical edema results.

The practical application of the theory of sodium retention has been exploited by several observers—Schemm<sup>1</sup>, Schroeder<sup>11</sup>, Progers et al<sup>12</sup>, Bridges et al<sup>13</sup>, Leevy et al<sup>14</sup>.

The main basis of the treatment is a low sodium diet with no restrictions of fluids. The sodium chloride content of various diets is given in the table below.

Type of Diet	Amount of Sodium Chloride
Average diet .....	6.0 to 12.0 grams
Diet with no extra salt .....	4.0 to 6.0 grams
Brooked without salt .....	2.0 to 4.0 grams
Low sodium diet .....	1.0 to 2.0 grams

Schemm<sup>1</sup> advocates a low sodium diet that yields a neutral or acid-ash residue because he feels that this aids in the mobilization of the alkaline sodium salts in the edema fluid. Bridges et al<sup>13</sup> point out that the addition of ammonium chloride creates a sufficient tendency to acidosis to render a neutral or acid ash diet unnecessary. Schroeder's work suggests that the low sodium diet is the most important factor, and the amount of fluid given was immaterial<sup>11</sup>.

The question of optimum fluid intake is not universally agreed on. One point accepted is that restriction of fluids is unnecessary, uncomfortable and dangerous. Schemm goes to the extreme of insisting on forcing fluids. The rationale of forcing fluids is as follows:

In the edematous patient there is an excess of water but it is bound as a water-salt mixture. This "briny" mixture may be sufficiently concentrated to dehydrate the tissue cells. Despite the presence of a greatly increased amount of interstitial fluid there is an insufficient amount of "free" water for the kidneys to function efficiently and so excrete the excess sodium. If these patients are given sufficient fluids without any increase in sodium intake there is a diuresis with increased excretion of sodium. In some patients diminution in the edema without loss of weight occurs suggesting that the water of interstitial fluids shifts into the dehydrated cells. Schemm advocates in milder cases, 2,500 to 3,000 ccs. daily; in dehydrated, febrile patients 4,500 to 6,000 ccs. daily; and in the most severe cases 10,000 ccs. daily. To obtain such a high fluid intake it was necessary to use intravenous fluids. While the patient was on low sodium diets the intravenous injection of fluids as 5% or 10% glucose

in distilled water (**never** saline) produced no harmful effects such as pulmonary edema. The absence of untoward effects of forcing fluids has been confirmed by others<sup>11, 14</sup>. The demonstration of the safety of forcing fluids and giving of intravenous fluid is important in the pre and post-operative care of cardiac patients undergoing surgery. Intravenous fluids may be given provided they are not in saline solution which is dangerous. Most observers<sup>11, 13, 14</sup> advocate fluids as desired by the patient who is encouraged to drink 2500-3500 ccs. daily. This amount is increased in cases of obvious dehydration or when diminished renal function is associated with urine of low, fixed, specific gravity. Leevy et al<sup>14</sup> make the point that undue forcing of fluids may cause nausea and distension.

The results of this low-sodium diet and free fluid intake have been encouraging. Schemm<sup>1</sup> reports that 95% of 393 periods of treatment of cases in chronic congestive failure responded to his regime plus the usual methods. In 20% of instances the response was directly attributable to the high fluid regime. Schroeder<sup>11</sup> reports that all 23 cases responded to low sodium diet and loss of edema with no other change in treatment. Bridges, Wheeler and White report the effect of low sodium diet on 64 patients as follows: 17 much help, 15 moderate benefit, 8 slight benefit, 7 no benefit, and 17 were unco-operative or there was insufficient data. In general the results were encouraging particularly in some cases of obstinate edema. The advantages of the regime are summarized briefly<sup>13</sup>:

(a) The control of edema that fails to respond to the usual methods.

(b) Diminishes the frequency with which mercurial diuretics must be given or obviates the necessity for them.

(c) The patient on free fluids is more comfortable physically and psychologically.

The main disadvantage is in obtaining the diet. The foods must be specially prepared without addition of salt but this can be done by any housewife. The most important item in the diet is the salt-free bread and salt-free butter as they alone can add 3 to 4 grams of sodium chloride to a diet. Salt-free bread can be made by anyone versed in the lost art of bread-making. The diet is rather flat but this is tolerable and can be aided by use of ammonium chloride as a salt.

It must be emphasized that this regime is only an adjunct to the accepted measures of rest, digitalis and diuretics. Ammonium chloride in doses of 3 to 6 grams daily is advantageous. The value of mercurial diuretics is well known. An interesting sidelight is that Reaser and Burch<sup>6</sup> showed that mercurial diuretics caused a selective

sodium excretion. Injection of the diuretic during the salt-free period caused a seven fold increase in sodium excretion and 2 to 3 fold increase in water. During the ordinary diet period (salt ad lib) mercurial diuretics caused a one hundred and sixty fold increase in sodium excretion with only five to three fold increase in water. The value of therapeutic effects of mercurial diuretics may be due to the marked increase in sodium excretion that they cause<sup>1</sup>.

The importance of these reports is that they show the value of a true low sodium diet in the management of chronic congestive heart failure. The older idea of restriction of fluids has been replaced by one that water can be given freely with perfect safety to the edematous patient in heart failure. Investigation of edema formation has been shown to have new avenues of approach.

## Appendix

### Details of Low Sodium Diet Foods High in Sodium—Avoid These

**Protein:** All salted canned meats, smoked or pickled meats, bacon, ham, kidney, seafoods and fish.

**Bread:** All bread prepared with salt; soda crackers; graham wafers; pastries, buns, and cookies prepared with salt.

**Dairy Products:** Salted butter, cheese, milk, ice cream.

**Vegetables:** Carrots, beets, celery, chard, onions, spinach, parsnips.

**Fruits:** Bananas, rhubarb, raisins, dates.

**Canned and Preserved Foods:** Canned soups, and vegetables, pickles, tomato juice, oxo or bouillon cubes.

### Foods Low in Sodium—Eat These

**Meats:** Two eggs, fresh meat or fowl—only one serving with each meal.

**Bread and Cereal Products:** Unsalted bread, puffed rice, shredded wheat, hot cereals, without salt; macaroni, spaghetti.

**Dairy Products:** Unsalted butter; milk (1 pint only daily), cream (¼ cup only daily).

**Vegetables:** Potatoes, asparagus, cabbage, corn, egg-plant, peas, squash, tomatoes (fresh), lettuce.

**Desserts:** One serving of fruit daily, jello, or plain puddings, honey, sugar candies, jam, syrups.

### General Instructions

1. No salt, soda, or salt substitutes to be used in cooking or at the table.
2. Use unsalted butter or wash salted butter thoroughly.
3. Buy or bake unsalted bread. This is the most important item in diet.
4. Use no stomach powders or soda bicarbonate for gas or indigestion.
5. Canned vegetables—rinse or boil in two waters.
6. Avoid all salted foods; e.g., nuts, potato chips, sardines, olives, pickles, and relishes, etcetera.

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## TUBERCULOSIS

### Intestinal Tuberculosis

V. J. Hagen, B.Sc., M.D.

Intestinal tuberculosis is the commonest complication of active pulmonary tuberculosis. The association of gastro-intestinal disturbances and pulmonary disease has long been recognized. Hippocrates described diarrhoea in a phthisical individual as "a mortal symptom." Since this early reference to intestinal tuberculosis and its gravity, the perplexing vagaries of this entity have tested the skill and patience of physicians. If this complication were only a terminal state it would demand little attention, but since intestinal disease may be associated with any degree of pulmonary involvement its importance increases many fold.

Tuberculosis in the bowel may be of two types—ulcerative or hypertrophic. The latter is rare and many of the cases described in the past may well have been regional ileitis. The differentiation of these two conditions is primarily a bacteriological problem. The ulcerative type may be primary or secondary. Primary intestinal tuberculosis usually occurs in childhood and, since the advent of pasteurization of milk, the incidence in Canada has fallen off sharply. Secondary ulcerative intestinal disease is found in association with active pulmonary tuberculosis—most often bacillary cases. The following remarks deal with secondary ulcerative disease—referred to clinically as tuberculous enterocolitis.

As intestinal tuberculosis is more common

far advanced than in minimal disease, there is a wide variance in the figures on its incidence, depending on the degree of pulmonary involvement in the cases studied. Three hundred and ninety-five cases of pulmonary tuberculosis were discharged from St. Boniface Sanatorium in the last two years and enterocolitis was present in 53—13.4%. Of the 80 minimal cases none had intestinal disease, of the 123 moderately advanced 7 or 5.6%, and of the 192 far advanced 46 or 23.9% had enterocolitis. These figures compare closely with the incidence found in other centres treating unselected cases.

Infection of the bowel may be haematogenous or by direct contact from within the lumen of the bowel. The latter is the more widely accepted theory. All patients swallow greater or less quantities of sputum and if this sputum contains tubercle bacilli the bowel is being contaminated constantly. The incidence is higher in patients with open cavities as is the frequency of positive sputum. Further substantiation is found in the fact that over 95% of intestinal tuberculosis occurs in bacillary cases.

Tubercle bacilli appear to be capable of penetrating the mucosa without producing detectable injury and become localized in the submucosal lymphoid tissues. Here they multiply and excite the first tubercle formation, accompanied by a low grade inflammatory reaction. Caseation with extension to the mucosa follows and evacuation of this caseous core together with necrosis of the mucosa produces a shallow ulcer. Secondary tubercles form and mature by the same process. In this manner the ulcer deepens and widens. Submucosal extensions result in fistulous tracts which may reach the surface of the mucosa at remote points. As the ulcer deepens, the base thickens due to the attendant inflammatory process and tubercle formation—this thickening no doubt plays a major role in preventing perforation of the bowel. Healing can and does occur—partly by resolution and partly by scar tissue formation. Denuded areas are epithelialized from the normal mucosa around the ulcer edges. Regeneration of the submucosa and muscularis is slight and as a result thin-walled dilatations may occur at the site of previous lesions. Stenosis is not a common finding in secondary intestinal tuberculosis.

The sites of ulcerative lesions in order of frequency are ileum, caecum, ascending colon, jejunum, transverse and descending colon, sigmoid, rectum and duodenum. Tuberculous disease of the stomach is rare. Involvement of the ileo-caecal region is present in the majority of cases. Explanations offered for this predilection are that the digestive processes are completed in the terminal ileum and absorption is very active; the

rate of flow is slowed; the numerous lymph follicles and Peyer's patches provide the lymphoid tissue for beginning tuberculous infection.

The symptomatology of tuberculous enterocolitis is very varied. The severity of symptoms bears scant relationship to the extent of bowel involvement. Gross ulceration may be present with little or no upset in digestive function. Incipient disease may manifest itself by slight dyspepsia, constipation, nervousness and irritability, fullness after eating, failure to gain weight under suitable conditions, slight fever or a brief attack of diarrhoea. The classical case usually exhibits the following symptomatology—colicky pain, alternating diarrhoea and constipation and later diarrhoea; temperature of swinging type—subnormal in the morning and up to 100-102° in the evening; rapid loss of weight, nausea, vomiting and loss of appetite when meals are brought in. The onset of the above picture bodes ill for the patient as it usually occurs in fulminating pulmonary cases and few are saved. Early diagnosis and treatment before this florid stage begins offers the greatest chance of cure.

Diagnosis of intestinal tuberculosis is often difficult and all too frequently obscured until too late. One must be suspicious of the diagnosis in any patient with open pulmonary tuberculosis who has gastro-intestinal symptoms. Laboratory procedures; e.g., haemoglobin estimations, leucocyte counts, stool examinations, etc., show no consistent findings. Demonstration of tubercle bacilli in stools is of little diagnostic value as they are present in 85-90% of patients with positive sputum. The final step in diagnosis is Roentgen ray examination of the bowel after an opaque meal.

The technique used at St. Boniface Sanatorium follows the principles as set down by Brown and Sampson at Trudeau Sanatorium. All laxatives and antispasmodics are discontinued for 24-36 hours before the test. The patient is given a mixture of barium sulphate 4 ounces, malted milk 2 ounces, with water up to 16 ounces which is taken with breakfast at 8.00 a.m. Fluoroscopic examinations are made at 5 hours and 9 hours, and followed by a 12-hour film. If deemed necessary a 24-hour fluoroscopy is done. The patient takes nothing by mouth until after the 5-hour examination. The diagnostic points to be watched for are general hypermotility with complete or nearly complete emptying of the colon in 24 hours; failure of the caecum, ascending colon, and hepatic flexure to retain the barium; consistent presence of spasm or spastic filling defects, particularly in the ileo-caecal region; definite segmentation, ileal stasis and gastric retention. Whilst these findings are essentially the Roentgen ray findings in ul-



cerative disease of the bowel, if they occur in a tuberculous individual then the diagnosis of tuberculous enterocolitis can safely be made.

The differential diagnosis consists of appendicitis, malignant tumors, amoebic dysentery, sprue, ulcerative colitis, diverticulitis, and achlorhydria.

Since enterocolitis is usually a complication of active pulmonary tuberculosis the treatment is directed not only toward the bowel but also to the underlying chest condition. Infirmary care is essential, preferably in a Sanatorium. Appropriate measures to control the pulmonary disease must be instituted, particularly with an eye to cavity closure and sputum conversion. Specific measures aimed at alleviating the bowel complaint fall into three groups—dietary, surgical and medical. The dietary regime used is a high caloric, bland, low residue diet containing ample supply of vitamins with four feedings daily. The role of specific vitamins is controversial but most investigators advocate supplementary administration of cod liver oil and vitamin C. A strict diet such as this becomes monotonous and the assistance of a dietitian is invaluable if the patient is to stay with the treatment. In seriously ill patients pabulum may be utilized as a supplementary feeding.

Surgical measures resolve mainly to the use of heliotherapy. Operative treatment is seldom, if ever, indicated. The application of ultra-violet light, either from natural or artificial sources, often results in dramatic relief of pain. Diarrhoea is affected to a lesser extent as are the other gastro-intestinal disturbances.

Medicinal therapy is to a large extent symptomatic. Constipation, when present, usually responds to mild laxatives. Caution should be exercised in the administration of mineral oil as its continued use will result in deficiency of all the fat soluble vitamins. Pain of varying intensity is usually present and if severe may even require opiates for its control: when crampy, relief is often effected by the use of antispasmodics. Diarrhoea in the early stages usually responds to inert powders; e.g., bismuth hydrate. Severe diarrhoea may be refractory to all forms of therapy. Some patients experience marked relief and comfort for varying periods following the administration of castor oil ( $\frac{1}{2}$ -1 ounce). Initially, there is an increase in the diarrhoea supplanted

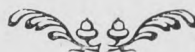
in turn by a constipated phase, and then frequent bowel movements followed by a return of the diarrhoea. Some authorities, however, have noted the onset of a severe diarrhoea, terminating only on the death of the patient, following castor oil therapy.

The use of calcium salts in the treatment of enterocolitis has long been advocated. Calcium chloride, intravenously, was the first agent used but it has since been supplanted by the gluconate which may be administered by mouth or parenterally. Adequate calcium ion concentration of the tissues decreases H-ion concentration which renders the environment less favourable for growth and multiplication of tubercle bacilli, promotes phagocytosis and fibrosis, and counteracts existing vagotonia by stimulation of sympathetic nerve fibres, thereby tending to restore normal physiological intestinal function. Calcium therapy results in a marked improvement in symptoms and may even bring about permanent cessation of diarrhoea.

Tuberculous enterocolitis is not a separate disease entity but a complication of open pulmonary disease. The tubercle bacilli gain entrance to the intestinal mucosa by direct contact from within the bowel, and the ulcerative lesions may be found anywhere in the small or large intestine but particularly in the ileo-caecal region. The symptoms may vary greatly from vague dyspepsia to severe diarrhoea and emaciation, but any digestive disturbance in a tuberculous individual should arouse suspicion of intestinal involvement. When suspected, Roentgen ray study of the bowel is the only method by which the diagnosis can be made or excluded, particularly in the incipient stage. Early diagnosis, treatment of the underlying pulmonary disease, together with diet, heliotherapy and symptomatic medicinal therapy, will effect cures in many cases.

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## OBSTETRICS

### Notes on a "Brain-Dusting" Trip

Dr. D. B. Stewart

The School of Medicine of George Washington University, in Washington, D.C., has recently finished a series of intensive post-graduate courses, organized by the university staff and aided by a grant from the Kellogg Foundation. It was my privilege to attend the three-week session in Obstetrics and Gynecology, organized by Professor John Parks. The program was an ambitious one, touching on almost all the major aspects of the specialty. Although this meant that no one topic could be considered exhaustively, emphasis was laid on recent work and modern trends. Such discussion, though sometimes controversial, provided the general practitioner and especially the returning medical officer with an up-to-the-minute review. As most of those attending the course had recently returned from the Services, this policy was deliberate. Dr. Parks is considering a change in future years to more detailed consideration of fewer topics, perhaps more valuable to the active general practitioner or the aspiring specialist.

About half the lectures were given by an able group of the university staff, and the rest by guest speakers from other teaching centres. Especially for a visitor from a distance it was stimulating to hear and see authorities whose names are familiar in the current literature, men such as Doctors Emil Novak, R. W. TeLinde, E. H. Richardson and H. S. Everett of Johns Hopkins; I. C. Rubin, S. A. Cosgrove and J. W. Davies, of New York; F. H. Falls, M. Edward Davis and H. E. Schmitz, of Chicago; J. W. Harris, of Madison; E. C. Hamblen, of Durham; L. K. Diamond, of Boston; W. F. Mengert, of Dallas, and many others. While it would be impossible to summarize all the discussions that went on during the three weeks a note on a few of the more recent and controversial topics might be of interest.

Dr. Parks set the key-note of the session in his opening discussion: there are 6,000 maternal deaths a year in the U.S.A. (a ratio of 1:450) and fundamentally every maternal death is preventable. While this has been much reduced in recent years, much remains to be done, not only in better medical training, hospital and public health organizations, but also in the education of the public to use and demand such services.

Early Ambulation of maternity cases has become almost essential due to the tremendous bed shortage during the war-time birth boom. Although the suggestion has been brought up

periodically ever since it was advocated by Charles White, of Manchester, in 1728, never before has there been such a large number of carefully observed cases for statistical study. Advocates of early ambulation say that the incidence of venous complications is much less, involution more rapid, drainage of lochia more complete, constipation and urinary retention rare, and that the incidence of infection and of hemorrhage are not increased. Patients with experience of both routines are said to heartily approve of early ambulation because they feel better and stronger both while in hospital and after going home, an important consideration in these days of inadequate home help. The routine varies with the intrepidity of the obstetrician and with hospital conditions in the different centres. At Cook County Hospital in Chicago all patients get up on the day of delivery, primiparae go home on the 5th day and multiparae on the 3rd. Where the hospital situation permits, though, most men seem to consider that even with early ambulation 7 days in hospital should be the minimum. After seven days afebrile the chance of infection is minimal, the mother is adjusted to her baby and has had a holiday from her family. Perhaps the most radical routine is that adopted by Dr. W. F. Mengert, of Dallas. His patients are assisted to walk around the bed as soon as they have completely recovered from the anaesthetic; on the first day they are sponged in bed, but from the second day on they walk to the bathroom and take shower-baths. The same routine is applied to Caesarian sections and even post-operative vaginal hysterectomies and perineal repairs. Mengert claims that there is only one conceivably valid argument against early ambulation, and that is the possibility of subsequent genital prolapse. However, prolapse is rare in negroes, who as a group seldom stay in bed after confinement; and in his own service where this routine has been used for over two years he has seen no evidence of any increase in the incidence of prolapse. Opinion is, of course, by no means uniform; some consider early ambulation a necessary evil in times of hospital crowding; others have adopted less drastic and more individualized routines.

Thrombophlebitis is another very pertinent topic. Increasing attention is being given to the careful differentiation of thrombophlebitis from phlebothrombosis, in which inflammation of the vein wall is absent and in which the clot is more friable and more prone to embolus-formation. While in both there is local pain over the involved vein, in thrombophlebitis the intense generalized pain, pallor and cyanosis are generally conceded

to be due to a reflex arterial spasm. These symptoms can be relieved and the spasm largely abolished by a paravertebral lumbar sympathetic block using novocaine. In some centres ligation of the vein above the thrombus (usually the common femoral) is advocated even in acute thrombophlebitis. Phlebothrombosis is less spectacular and harder to diagnose; the early signs are less marked, and not uncommonly a pulmonary embolus may be the first indication. In this condition there is much more general acceptance of treatment by ligation especially if there has been a "warning embolus." Ligation above the clot, even as high as the inferior vena cava, has been done successfully and is often life-saving. Sympathetic block is of less value here as the arterial spasm is usually not marked.

Many cases appear to fall in an intermediate zone between thrombophlebitis and phlebothrombosis. Here many consider it safer to ligate than not to ligate, and use sympathetic block where it is indicated for pain relief.

The use of such anti-coagulants as heparin and dicoumarol seems to be very unsettled. Advocates of early ligation consider surgery an adequate mode of treatment. More conservative clinicians, however, have been much interested in reports recently submitted by a visiting Swedish worker on results with anti-coagulants. One gets the impression that no one treatment can yet be considered the most satisfactory for these disturbing and dangerous complications.

An interesting innovation in the care of the new-born is being planned for the new George Washington University Hospital. The ordinary

hospital nursery is in some ways unsatisfactory and the remark has been made that the new-born infant should be considered a hospital patient in his own right rather than a mere by-product. Starting with the assumption that one nurse can give adequate care to not more than eight new-borns, the nurseries are divided into eight or nine nursing units. These are distributed through the hospital: one 8-crib nursery between two 4-bed wards; or a four-crib nursery between two double wards; and there are also to be a few single wards with attached one-crib nursery accommodation. The bassinets are to be mounted on small individual carriages containing drawers and shelves for the baby's individual supplies, and the whole unit can be wheeled to the mother's bed-side. It is proposed to leave the babies with the mother for a good part of the time, and the mothers will be encouraged to take an active part in their babies' care. This will give the mother an introduction to her new duties, for which she is otherwise usually relatively unprepared when she goes home. The plan should lessen the risk of infection unavoidable in large nurseries, will make isolation of infected mothers or babies easier, and will eliminate the exposure involved in long corridor trips to the mothers' rooms. The nursery nurse will become less of a care-taker and more of a teacher. Doctors McLendon and Park, the originators of the plan, are not dogmatic about it until it has been put into practice, but consider it will be a useful controlled experiment. Certainly the plan appears to be well thought out and its future worth watching.

D. P. Stewart

## PAEDIATRICS

### About Reinforcing the Basic Immunization

The merits of basic immunization in infancy are pretty well recognized, but it is generally less known, that the antibodies thus produced will gradually decrease in number over a period of time. To maintain the level of immunity obtained through the first course of basic immunization, one has to revaccinate the child at certain intervals. It is interesting to note that according to most authors the agglutinin titers obtained are often much higher following revaccination than following the basic course of immunization. One hears and reads of cases when a child was immunized against Diphtheria at nine months and has contracted the disease at four years. To discredit the value of immunization in similar cases would be erroneous, what happened is that the basic immunity became ineffective and the child

had not received a "booster dose" to restore his antibodies to a safe level.

It is very important to let these facts be more generally known so that the revaccination against infectious diseases may take its proper place among our prophylactic measures.

Although the value of reimmunization is accepted by most physicians there is considerable disagreement about when and how often one should advise the same. An extensive use of Shick, Dick, and Strean tests naturally is of great assistance in establishing the proper degree of protection possessed by a child against Diphtheria, Scarlet Fever, and Pertussis, but often takes too much time and the reading of the tests is frequently rather subjective. Even if tests are useful in the hands of many, if definite rules could be laid down regarding the safe time interval between reinforcing doses, much extra work



could be spared without decreasing the child's chances to obtain the most benefit from the immunization.

It is true enough that the protective antibody level obtained through the basic immunization depends on a number of factors such as, the child's constitutional ability to respond to active immunization, his age, type of vaccine, number of injections, and so on, still one should be able to adopt a general working routine according to our present knowledge; this naturally should be corrected as more information is obtained.

After reviewing the literature we have adopted the following routine in our immunization procedures.

**Diphtheria**—A stimulating dose of 1 cc of fluid toxoid is given 12 months after the basic immunization. If the child is exposed to Diphtheria at any time, a reinforcing dose is given although the value is debatable because of the short period of incubation. A booster dose is given before the child enters school.

**Pertussis**—A reinforcing dose is given not later than one year after the original course was completed, again at three years of age, and when the child enters school. A stimulating dose should be given after known exposure.

**Small Pox**—The generally accepted routine of the past years remains unchanged: repeat vaccination when the child enters school.

**Scarlet Fever**—Very little additional information is available since Scarlet Fever toxin was originally introduced for active immunization. Its value is still debated, however, when given it is recommended that one month after the basic course is completed a Dick test be done; if this is positive further injections should be given. The test should be repeated at three years and again at entering school.

**Tetanus**—As this infection is very rare in Manitoba no routine immunization is adopted against it. However, when a basic immunization is requested it is recommended that at least two reinforcing doses should be given, the first one a year after the basic course and the second one when the child enters school. In cases where a high level of antitoxin is desirable it is recommended to give reinforcing doses annually.

**Typhoid Fever**—In communities where Typhoid Fever is endemic revaccination every two years by means of a single dose is recommended.

The subject of revaccination is still a young one. There is much to be learned. There is only

one thing certain: one should not consider a child protected against an infectious disease just because he has received a basic course of immunization. One should realize the importance of reinforcing this immunization.

J. G.

## Lower Nephron Nephrosis

(The Renal Lesions of the Crush Syndrome, of Burns, Transfusions, and other conditions affecting the Lower Segments of the Nephrons).

Colonel Baldwin Lucke

Army Institute of Pathology, Washington, D.C.  
The Military Surgeon, Vol. 99: 371-96, November, 1946.

Haemoglobinuric nephrosis, the name previously given to this syndrome, accounted for 18% of the deaths of soldiers injured in World War II. It is a complication of such injuries as burns, muscle trauma, uteroplacental damage, and is the cause of death in incompatible transfusions and also in one type of nephropathy due to sulfa intoxication.

The clinical picture is one of shock and renal failure following one of the above accidents. Death will occur within ten days of the onset of this syndrome if it is to prove fatal.

Pathology in this disease is found in the kidney and especially in the tubules distal to Henle's Loop. However, the juxtaglomerular apparatus may show hypertrophy and increased granularity.

The tubular lesions are those of degeneration and necrosis. Dilated tubules may be seen. In cases progressing to recovery, the necrotic epithelium is replaced by flat and later cuboidal cells. In the lumen of these tubules in the necrotic area, casts of heme or non-pigmented material may appear.

The bulging tubules may encroach on thin-walled veins and lead to thromboses in these veins.

The nature of this disease is obscure and one can only guess at why the large hemoglobin molecule will pass the renal filter and why it should precipitate out in the distal tubule. It appears from experimental work that alkalinization as used in sulfa therapy and advised in mismatched transfusions has little bearing on the production of these casts in the distal tubules.

92 references; 16 figures; 1 table.

Sydney Israels.

## Jaundice In Infancy and Childhood

J. H. Martin, B.A., M.D.

Resident in Medicine, St. Boniface Hospital

Jaundice is best defined as the condition in which there is an excess of bile pigment in the blood with resultant yellow coloration of the tissues, notably manifested in the sclera, mucous membranes and skin. It must be remembered that jaundice is not a disease but only a sign. It may be produced by disordered function of many tissues; the fault may lie within or without the liver and any of several mechanisms may be at work.

In dealing with this subject, McNee's classification will be adhered to since, as Tumen in Bockus' Gastroenterology states, "it possesses the virtue of calling immediate attention to the primary factor which is responsible for the icterus and thus directing the physician's attention to the therapeutic problem involved."

This classification is based on the metabolism of bilirubin and may be outlined in the following simplified form.

Bilirubin is formed as a breakdown product of hemoglobin in the reticuloendothelial system. It passes to the liver where it is excreted by the hepatic cells into the biliary tree and hence to the bowel. Here the intestinal bacteria reduce it to urobilinogen (stercobilinogen) in which form it is for the most part excreted in the feces giving them their characteristic coloring. A small portion, however, is reabsorbed by the portal system and so re-enters the general circulation, either to be re-excreted by the liver or to pass through the kidney filter.

Therefore, any disturbance which causes increased hemolysis will cause an increase in circulating bilirubin. Clinically, this produces a "hemolytic jaundice." This, however, is not the whole story. The normal liver is able to excrete huge amounts of bilirubin. In hemolytic jaundice, other incompletely understood factors, possibly anoxemia of the liver cells, must be in operation. Bile is absent from the urine, but urobilinogen is increased.

Disease of the liver through damage to the liver cells, will prevent both the removal of bilirubin from the blood and its excretion into the bile passages. This is "hepato-cellular jaundice," which therefore presents features of both the hemolytic and the destructive type. Bile is present in the urine, urobilinogen may or may not be increased.

When the outflow of bile through the biliary tree is prevented, bilirubin is regurgitated back into the blood stream. This is "obstructive jaun-

dice." Bile is found in the urine, but if the obstruction be complete, urobilinogen disappears.

Almost every hepatocellular jaundice possesses some features of obstruction due to blocking of the biliary canaliculi with inspissated bile and cellular debris.

When considering the clinical types of jaundice it must be realized that they rarely exist in a pure form, each showing some characteristics of the other two forms.

## HEMOLYTIC JAUNDICE

### Icterus Neonatorum

Probably somewhere between 50 and 75% of all newborn babies show some degree of jaundice during their first two or three weeks of life. This usually clears up without any apparent deleterious results and has been termed "physiological icterus." In a careful recent study made by Davidson, Merritt and Weech, the authors find that clinical jaundice is probably never present at birth and rarely develops after the sixth day. There is no actual correlation between the degree of bilirubinemia and the observed discoloration. Should it persist for more than 14 days, the existence of some pathological condition must be suspected although "icterus neonatorum prolongatus" lasting up to one month has been described.

The exact mechanism of this phenomenon is still indefinite. In part, the jaundice must be due to hemolysis of unneeded red cells after the relative anoxemia of intra-uterine life is removed. However, this is not all. Davidson et al have shown that there is a definite increase in the bilirubin in cord blood (average 1.09 mg. %) above normal limits (0.1 to 0.5 mg. %), and that there was a definite correlation between the degree of this elevation and the duration and severity of the jaundice. They suggest that this hyperbilirubinemia is an index of the immaturity of the newborn liver in its ability to excrete bilirubin. This is in harmony with the finding of increased jaundice in prematures and Yllo's demonstration of diminished bilirubin in the meconium of jaundiced infants. So it is probable that there exist both hematogenous and hepatogenous factors.

Clinically, there is no hepatosplenomegaly. Although sluggishness, poor appetite, etc., are sometimes attributed to the jaundice, they always clear quickly. It should be re-emphasized that erythrocytes hemolysed at this time are not wasted but important fractions, notably iron, are stored to tide the infant over the early nursing period when absorption of these factors from the bowel is poor or absent. All the blood contained in the cord and in the placenta belongs to the newborn. Early clamping of the cord deprives the child of a significant amount of blood and is condemned

### Erythroblastosis Foetalis

One hesitates to summarize a subject such as this, concerning which so much has been recently written and about which so many questions are yet unanswered.

Probably the most commonly accepted theory is as follows: A woman possesses an incompletely elucidated but definite constitutional ability to form agglutinins to any one of several antigenic factors (Rh, Hr, Ab, etc., have been described). A factor may be received from either (1) A pregnancy previous or present, in which the fetus possessed the factor or (2) A transfusion of blood containing the factor. These agglutinins, the anti-Rh-type being the best known, pass into the fetal circulation where they may initiate pathological processes with various clinical manifestations. To say more than this about etiology is to become entangled in a mass of highly theoretical details.

Some manifestation of the disease is said to occur once in every 300 deliveries. Diagnosis is made on:

1. The prenatal knowledge of a sibling who has had some feature of the disease.
2. The recognition of an Rh-positive father and an Rh-negative mother. This indicates only a potentiality, not even a probability.
3. The fact of an infant dying before or shortly after delivery with general edema.
4. The presence of a live infant who shows a yellow vernix, a rapidly developing pallor (which may be masked by a deepening jaundice), hemorrhages, a grossly enlarged liver and spleen and drowsiness progressing to convulsions and coma.
5. Laboratory findings of 10,000 to 100,000 immature nucleated cells in the blood stream (normal 200 to 2,000), a rapidly falling blood count and thrombocytopenia, plus confirmatory Rh blood findings (not invariable, due to so-called "blocking antibody").

Treatment is extremely controversial and will not be dealt with. However, it is of utmost importance in these days when transfusions are such common procedure that every female of any age should be Rh cross matched before receiving any parenteral blood to obviate the disappointment of delivering an erythroblastotic fetus.

### Other Hemolytic Anemias With Jaundice

In 1889 von Jaksh described a hemolytic anemia with splenomegaly. Following this, Jaksh-Hayem Luzet's anemia became a catch-all for diseases of this type. It is only in the past two decades that any order has become evident. At least three varieties are now fairly clearly defined—Mediterranean Anemia, Sick Cell Anemia and Congenital Hemolytic Jaundice. Each has a definite racial

tendency; Sick Cell disease occurs in the negro. Mediterranean Anemia in children of Italian and Greek descent, while Chronic Hemolytic Jaundice has a predisposition for southern Germanic races. All have a strong hereditary tendency and probably are due to an inherent defect of bone marrow function which results in the production of deformed cells.

### Mediterranean Anemia (Cooley's)

This condition is seen as early as the third or fourth month but often not until after the fifth year. Many individuals carry subclinical features unrecognized through life. Neel and Valentine claim an incidence as high as 1:25 in the Italian population of Rochester, N.Y.

The disease is characterized by: an increasing pallor with an associated anorexia and retarded growth. It is not characterized by remissions and exacerbations. The physical findings are yellowness of the skin, mongoloid facies with protruding teeth, and tremendous enlargement of the spleen. This organ may become so large and heavy that the child is unable to stand.

The blood examination reveals a normal or moderately reduced erythrocyte count with very low hemoglobin content—a hypochromic anemia. Smith has described three types of cells, namely, "target cells," those with a pale centre and hemoglobin at the periphery, and those with irregularly scattered hemoglobin. One of the most characteristic tests is a decreased fragility, often distilled water being required to hemolyze the cells.

No specific treatment is known. Smith states that when a child of Mediterranean origin fails to respond to adequate iron therapy, its future course will probably be that of Mediterranean Anemia.

### Sick Cell Anemia

The tendency to form sickle cells is said to be present in about 1/10 of all negroes, but again, in only about 1/10 of these is there any clinical evidence of this disorder.

The disease is characterized by abdominal and arthritic pains ushering in an exacerbation. Jaundice soon develops. The spleen and liver become enlarged. Temperature is elevated.

Diagnosis is made by finding the sickle-shaped cells in a fresh smear exposed to an atmosphere of carbon dioxide. Erythrocyte counts fall rapidly to as low as 1,000,000 per cubic millimeter. Splenectomy has been advocated.

### Congenital Hemolytic Jaundice

This again is a disease characterized by remissions and exacerbations. It is frequently associated with other developmental anomalies—tower skull, epicanthus, palatal defects and digital



deformities. Manifestations may appear in infancy but usually not until the second year.

A crisis often begins with fever and there is an increasing weakness and pallor plus abdominal pain. The spleen, which between attacks is barely palpable, becomes rapidly enlarged. The blood, of course, shows increased bilirubinemia. The typical blood finding is a microspherulocytosis. Small rounded cells may be as high as 60 to 70%. The diagnostic feature is an increased fragility of the erythrocyte in hypotonic saline.

With repeated attacks, the child suffers and normal development is delayed. Cholelithiasis in the young is a common accompaniment. Splenectomy, done during a remission, is the only satisfactory treatment.

Damesheck and Singer have described a familiar non-hemolytic icterus without splenomegaly, spherulocytosis, or increased fragility, which they believe to be due to a decreased permeability of bilirubin through the hepatic cells.

#### Septicemias

Many of the specific diseases are accompanied by jaundice. The exact mechanism for its production may vary with each being due to hemolytic effect of the invading organism, hepatitis due to the toxins they produce, or allergic susceptibility induced. They will be grouped for simplicity and include pneumonia, hemolytic streptococcus or staphylococcal bacteremia, various anaerobic bacteria, tuberculosis, malaria and infectious mononucleosis. Hepatitis induced by infection ascending the umbilical cord following improper care used to be common. Occasionally no external lesion is obvious.

### HEPATOCELLULAR JAUNDICE

#### Infectious Hepatitis

This is the only type of jaundice which is common in children after infancy. So much has been learned about it in the past five years from military experience that it has become almost a new disease. So much has been written that only the barest summary is possible.

Jaundice of this type is probably extremely rare before the second year but after that its incidence in children is said to equal that of adults. In Leicestershire 1,017 cases reported showed that 6.4% occurred before the age of five, 83.3% from five to fifteen, and only 10.3% over fifteen. There must be a great variance with different epidemics.

In the light of present knowledge, the old idea of "catarrh" of the biliary tract must be discarded. Everything points to a filterable virus or group of viruses as the etiological agent. The enteric route of transmission seems the most likely.

Diagnosis is usually not difficult when the onset is typical. There may be a very sudden onset of malaise, anorexia, nausea, headache and general weakness. Icterus appears in 1 to 18 days and persists for an average of 3 to 4 weeks but may be much longer. Lymphadenopathy is present in 81%. Right sided abdominal pain is common in children, usually accompanied by an enlarged tender liver.

However, in epidemics in about 10% there are no symptoms before the onset of jaundice. Hepatitis without icterus is fairly common and its incidence in an epidemic must be high.

Of diagnostic value in the pre-icteric phase is the use of the histamine test where a histamine wheal will show an icteric tint. The urine is darkened early with bile and urobilinogen is present in increased amounts. Moderate leukopenia is the rule.

There is no specific treatment. Results with methionine have been disappointing. There is some promise in the use of immune globulin in the prevention of the disease when epidemics exist as reported by Stokes and Neeffe. Prognosis is good though permanent liver damage may remain.

Homologous serum jaundice follows the injection of human blood or its products containing the specific virus. Clinically, it is almost indistinguishable from infectious hepatitis but a longer incubation period (3 to 4 months), lack of cross immunization, lack of facility of experimental transmission by the enteric route and failure to spread from person to person serve to differentiate it.

It is well, therefore, always to bear in mind the possibility of the presence of serum hepatitis in children in whom icterus develops following parenteral injections of human blood products.

#### Syphilitic Hepatitis

Liver involvement is said to occur in from 25 to 55% of infants with congenital syphilis. Many are stillborn. Those who live present wasting, anemia and the characteristic mucocutaneous and bone lesions. The liver is grossly enlarged, firm and somewhat tender. It is usually not lobulated as in tertiary lues. Jaundice, which is relatively common, produces a cafe-au-lait appearance. Remember that if the mother's serology is positive the infant's is also positive, whether or not it is infected. A progressively increasing titration indicates disease.

Every woman who has or has had any evidence of syphilis whatsoever, clinical or serological, demands at least one course of anti-luetic therapy during the term of her pregnancy.

Weil's disease and Canicola fever and other spirochaetal jaundices are so rare in this province that they do not merit discussion.

#### Toxic Hepatitis

Following ingestion or administration of many "hepatotoxic" agents, a clinical picture similar to infectious hepatitis may develop which may improve or proceed to acute yellow atrophy and death. The list of drugs is long, the commonest being cinchophen and other antipyretics, arsenic, bismuth, chloroform, and the sulphonamides. Accidentally ingested poisons commonly terminate with acute yellow atrophy. Breakdown products from severe burns cause gross parenchymal liver damage.

#### Cirrhosis of the Liver

This is not common in children. Moon was able to collect only 832 cases. Etiology is as confused in the child as in the adult disease. In childhood the onset is often with jaundice. It is usually insidious with digestive disturbances, loss of appetite, and loss of weight. Anemia is present as is decreased plasma albumen and blood prothrombin. The liver is usually enlarged. Many of the so-called "Banti's syndrome" have some relationship to childhood cirrhosis. Ascites is a late feature. Hemorrhages from esophageal varices often cause death.

### OBSTRUCTIVE JAUNDICE

It is in this group of icterus that the greatest divergence from adult form is seen. The causes are few. Cholecystitis and cholelithiasis are reported, but rarely. Only three types occur with sufficient frequency to warrant discussion.

Cystic dilatation of the common duct is probably due to congenital weakness. Clinical features are jaundice, fever, and pain especially in the right upper quadrant. The cyst may reach sufficient size to present an abdominal tumor. Treatment is surgical.

Congenital obstruction of the biliary tree may assume several anatomical forms. Ladd has described complete absence, atresia, and a cystic gall bladder lacking connection to either the liver or duodenum. Clinically, jaundice does not usually appear until the second or third week of life but deepens to a greenish-yellow tinge. The infant is usually remarkably well developed and nourished. The liver is enlarged and hard. The urine is darkly colored with bile. Stools are usually acholic but may be tinged apparently due to mucosal excretion of bilirubin. Treatment is surgical, preferably done in the second month of life.

Plugging of the biliary tree with inspissated bile is occasionally encountered. The features are similar to the above but are differentiated by the intermittency of the jaundice and of the acholic stool. Treatment is by cholagogues such as magnesium sulphate.

Ladd gives the suggestion that if one delays making a final diagnosis of congenital biliary obstruction until the infant is four to six weeks old, the chance of error is not great.

### CONCLUSION

Some of the clinical features of the most common types of jaundice in the young are presented. No attempt has been made to discuss more than the simplest laboratory aids to diagnosis. Advancement of therapeutic methods, especially those allowing surgery in the presence of jaundice, make it essential that every diagnostic method available be used to arrive at an early and accurate diagnosis.

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# ANAESTHESIOLOGY

Edited by P. C. Lund, M.D., Anaesthetist, Deer Lodge Hospital

## Report of Meeting

A festive atmosphere prevailed during the May meeting of the Manitoba Division of the Canadian Anaesthetists' Society. This was the final meeting of the current season.

Dr. J. C. Hossack, the guest speaker, gave forth with an amusing and interesting discourse on the history of Anaesthesia and its relation to Greek mythology. He paid tribute to the recent advances in anaesthesia which have increased the comfort and safety of the patient during the operative intervention.

Dr. D. Huggins, who has recently returned from a post-graduate course at Hartford, Conn., presented a most interesting and vivid Travelogue. Dr. Huggins described the anaesthesia service at the Hartford hospital and other Eastern U.S. hospitals. She also referred to recent research work being done with intravenous procaine.

The election of officers for the ensuing term took place, with the following results:

President	Dr. A. C. Rumball
Secretary	Dr. M. Bennett
Councillor	Dr. D. Revell

## Abstract

**Spinal Anaesthesia in Vaginal Delivery.** A report of 1,547 cases. Weaver, R. T., et al. *Am. J. Obst. and Gynec.* 51:764-769 (June), 1946.

A report of 1,547 obstetric patients is presented, in whom small doses of spinal anaesthesia were used for vaginal delivery at the Mount Hamilton Hospital (Hamilton, Ontario). 101 cesarean sections were performed at the same hospital, as well as several hundred vaginal deliveries at Casa Maria and the Mountain Sanatorium, both of Hamilton, under spinal anaesthesia; none of these is included in this report. Novocain crystals dissolved in about 2 c.c. of spinal fluid is their anaesthetic of choice, injected into the third or fourth lumbar interspace without barbotage. The small dose employed, 50 mg., is sufficient to give a painless delivery, but does not materially decrease uterine contractions. The duration of anaesthesia, with good perineal relaxation, is about one hour. It has been our practice to use outlet forceps and episiotomy in the majority of our cases, regardless of the type of anaesthetic employed. That procedure is usually necessary when spinal anaesthesia is used, as the involuntary expulsive efforts of the patient have been eliminated.

We have listed as "failures" all patients receiving any other anaesthetic whatever; a total of

63, or 4.2 per cent. Since the anaesthetic effect usually persists for a considerably longer time than is required for actual delivery, it has become the practice of our staff to perform quite extensive perineorrhaphies where indicated, including closure of rectovaginal fistulas, immediately following delivery. Although parturition may have been accomplished without laceration, a pre-existing condition can be repaired, thus saving a later gynecologic procedure with its attendant anaesthetic. In our series there were five patients who were recorded as having some form of shock. In each case, the recovery was prompt with appropriate measure, and the child was normal. There have been no maternal deaths, either immediate or during puerperium, from any cause. There have been 43 stillborn babies and 11 neonatal deaths, giving a combined fetal loss of 3.7 per cent. For the ten-year period, the combined percentage in our hospitals, 5.1. In analyzing the 43 stillbirths, it was found that in 29 no fetal heart could be heard before delivery. Of these, six had a complete separation of the placenta. Of the remainder, there were six monstrosities. In only eight patients was there a reasonable chance of obtaining a normal baby, when the anaesthetic was given. Of the eight, two were breech presentations in primiparas; one an internal podalic version after a long labor; one an abnormally large baby; one a twenty-seven week premature; one had the cord twice around the neck and very tight; and two were midforceps deliveries. Careful review of the hospital records fails to show the anaesthetic drug as a contributing factor in any of these fatalities. From these figures it would seem reasonable to conclude that a baby born under spinal anaesthesia has a better chance of living than it has when other anaesthetics are used."

P. C. L.

## Abstract

**The Choice of Anaesthesia in Cardiac Disease.** *Anaesthesiology*, 7:268-275, May, 1946.

The choice of anaesthesia for patients suffering from moderate or severe cardiac disease has always been a problem since these people usually belong to the older age group and, with their impaired cardiac status, are considered poor anaesthetic and surgical risks. If possible, the anaesthesia, while providing suitable working conditions for the surgeon, should also be physiologically selected to meet and perhaps help remedy the cardiac deficiency. In many instances of minor



surgery, the anaesthesia of choice which produces the least change in the patient is local infiltration or regional field block with procaine hydrochloride or a similar agent. The group with coronary artery disease is so labeled because of a history of a previous occlusion or infarction, sometimes substantiated by electrocardiographic findings, or a history of anginal, precordial or substernal pain. Fear and apprehension must be allayed. Too much stress cannot be placed upon preoperative sedation, and if error is to be made, it is better to be slightly on the side of an overdose.

Anoxia of the cardiac muscle is to be feared and is prevented by avoidance of a fall in the diastolic blood pressure, since it is upon the diastolic pressure that the coronary arteries depend for their supply of blood. Second, there must be maintenance of a high oxygen intake, using only those agents which permit a high percentage of oxygen to be administered while at the same time producing suitable anaesthesia. Third, the excitement stage with its violent muscular exertion and consequent imposition of great strain upon the cardiac musculature may precipitate a coronary spasm and occlusion or myocardial infarction. This is avoided by the use of rapid-acting agents. Fourth, overloading of the circulation by large amounts of intravenous fluids may put too great a strain upon the heart and lead to cardiac failure. In most instances, spinal anaesthesia is contraindicated because of its tendency to produce a drop, often precipitous in nature, in both the systolic and diastolic blood pressures. In minor and extraperitoneal procedures not requiring any great degree of relaxation, intravenous sodium pentothal in a 2-3 per cent solution combined with inhalations of 100 per cent oxygen is the method of choice.

In intra-abdominal procedures inhalation anaesthesia is the method of choice. A combination of cyclopropane with ether and oxygen has proved most satisfactory. Cyclopropane is depended upon to produce the larger part of the anaesthesia, just enough ether being added to stabilize the heart rhythm. Usually only a trace is sufficient. This type of case is ideally suited to the use of a balanced anaesthesia, using some form of local or regional anaesthesia combined with the general anaesthetic agent. Aminophylline has seemed of value in this group of patients and is now used routinely. Two cubic centimeters containing  $7\frac{1}{2}$  grains are given intramuscularly about fifteen minutes before the start of the anaesthetic. This is done to take advantage of the ability of the drug to produce coronary dilatation and bronchial relaxation. The physiologic etiology of pulmonary edema and cardiac decompensation is controversial.

For the purpose of this discussion, patients will be considered on the basis of their symptomatology and physical findings regardless of the etiologic factors involved. In this group are included those with the signs and symptoms of cardiac decompensation, a history of such an episode, and those who show the findings which suggest that an episode of decompensation might occur if the cardiac system was subjected to an extra load. The predominant symptoms of this group are dyspnea on exertion, orthopnea and ankle edema. Basal rales are often found on examination. A history of rheumatic fever with the presence of a valvular lesion also automatically includes the patient. The anaesthesia of choice in this group of patients is spinal. In some instances it is desirable to put the patient to sleep, as when there are stimuli from mesenteric traction, uncontrollable nausea or emotional instability. The best method is a continuous pentothal drip, with a 50 per cent mixture of nitrous oxide and oxygen.

If the operation is an elective one and the patient presents some of the signs and symptoms of failure, an effort to digitalize him should be made in the preoperative period.

In the case of emergency surgery, however, a test dose of ouabain should be given and more held in readiness to be administered at the first sign of decompensation. A high concentration of oxygen should be administered throughout the operative procedure. The routine use of a pressor drug prior to the administration of a spinal anaesthetic should be continued here to maintain the blood pressure. Patients with hypertension can be divided into two groups; those with elevation of only the systolic blood pressure and those with elevation of both systolic and diastolic pressures. The diastolic elevation is the most significant since it is upon the diastolic pressure that the coronary arteries depend for their blood supply. In the group with a very high diastolic pressure, spinal anaesthesia is contraindicated for any intra-abdominal procedure that may be associated with a sharp fall in blood pressure. Many minor operations on superficial parts of the body in which relaxation is not required may safely be done with intravenous sodium pentothal combined with 100 per cent oxygen. For all major procedures, however, inhalation anaesthesia is the method of choice with cyclopropane-oxygen as the agent most desirable. When a severe amount of kidney damage is present, the anaesthesia of choice is spinal. If hypertensive heart disease is combined with arteriosclerotic heart disease, inhalation anaesthesia with cyclopropane with or without the addition of small quantities of ether is again the method of choice.

P. C. L.



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## Hospital Clinical Reports

Reported by J. M. Whiteford, M.D.

### Winnipeg General Hospital

#### A Case of Mammary Carcinoma Treated With Testosterone

Dr. A. A. Klass

Experimental evidence from the use of mice has indicated that sex hormone substances may have definite effects on the occurrence of breast carcinoma.

Lacsgagne (1936) and Loeb (1936) showed that oestrogenic substance had a considerable cancer stimulating effect on mammary glands when administered to mice. On the other hand Raynaud (1939) and Murlin (1939) concluded that androgens had a retarding effect on the occurrence of mouse mammary carcinoma. This latter effect has recently been corroborated by Heiman (1945). Using a strain of mammary cancer-prone mice (C. 111) he gave prophylactic injections of testosterone propionate and progesterone. He concluded that injections of progesterone alone reduced the incidence of breast cancers in these mice from an expected 54% to an actual incidence of 16.6% and that injections of testosterone propionate together with progesterone further reduced the incidence to 6.25%. He suggested "the injection of testosterone propionate and progesterone as a prophylactic measure in women with a family history of cancer."

Recently the effect of androgens on cases of human breast carcinoma has been studied.

Loeser (1941) and Fels (1944) report cases of mammary carcinoma with apparent improvement upon administration of androgens supplementing standard surgical procedures.

On the other hand Farrow and Woodard (1942) stated that in certain instances osseous metastases from breast carcinoma were stimulated to more rapid growth by testosterone and Abel (1945) concludes that while there is definite improvement in subjective symptoms with androgen therapy in malignant disease "there is nothing to indicate any regression or even retardation of the malignant process." Farrow, Woodard and Abel used testosterone in comparatively small amounts.

Using more liberal amounts Prudente (1945) reports a study of 63 cases of breast cancer given testosterone propionate as a post-operative measure in doses of 25 to 175 mgm. weekly for periods, in some cases, of up to 3 years. On the basis of a control group of 64 cases treated by the same operative technique but without testosterone therapy, Prudente concludes that the testosterone

treated group has produced a survival rate twice as great as in the control series. An editorial in the British Medical Journal (1946) referring to the above report concludes that "it is probably wise not to accept the data as evidence sufficient to support a thesis which is far too important to be lightly accepted or lightly dismissed."

Adair and Hermann (1946) report eleven cases of advanced breast carcinoma receiving testosterone therapy, four of which showed improvement, four showed no response, and three others are still under treatment without clinical evidence of improvement. In a more recent report on the subject Adair (1947) on the basis of a study of 200 cases of mammary carcinoma receiving more liberal amounts of testosterone (150 to 300 mgm. weekly) states "a most striking improvement is obtained in most of the cases having bone metastases."

None of the reports above deal specifically with the subject of pulmonary secondaries. The rate of progression or regression of lung metastases can be readily gauged by regular radiological examination of the lungs and this lends itself to objective clinical study.

Adair (1947) in referring to the effect of androgen therapy on visceral metastases states "it must at present be taken for granted that most such cases receive no benefit aside from the temporary general improvement which frequently comes as a result of testosterone injections."

In view of the above reasons, the following case history may be worthy of record.

#### Case Report

During a mass chest survey on miniature films carried out among the employees of a large insurance office, Miss M. W., age 40, was discovered to have multiple metastatic carcinomatous lesions throughout both lung fields. She was interviewed by the chief medical officer of the Company and admitted to him that for the previous twelve months she had a growing lump in her right breast—but had never sought medical advice.

Aside from thyroidectomy, which I had performed for toxic goitre in 1939, her previous history was essentially negative. On direct questioning she stated that she experienced pain in the right breast and arm and that for the past four months she had been troubled with a frequent cough, at first non-productive but recently associated with scanty amounts of blood-stained sputum. In the past year she had lost 8 pounds in weight.



Her general appearance did not indicate ill health. In the lower segment of the right breast there was a hard tumor about 4 cm. in diameter, fixed to both skin and underlying chest wall. There was an additional separate mass about 2 by 1 cm. just behind the medial portion of the anterior fold of the axilla. No masses were palpable in the central or apical axillary regions.

Upon clinical grounds this was without doubt an advanced carcinoma of the right breast with diffuse pulmonary metastases. There was no radiological evidence of secondaries in the vertebral column, skull or pelvis.

In view of the pain associated with use of her right arm in typing and the likelihood of imminent fungation through the fixed overlying skin, a palliative mastectomy was advised.

For the 26 days while awaiting hospital accommodation she received 500 mgms. of testosterone in doses of 50 mgms. three times weekly.

On October 27, 1946, at the Winnipeg General Hospital, a modified simple mastectomy was performed, including removal of pectoral fascia and the attached portion of pectoral muscles down to the rib level. Fat and tissue under the anterior axillary wall was excised but no formal axillary dissection was done. There was an uneventful recovery from this procedure.

The report of Dr. D. W. Penner of the Pathology Department of the Winnipeg General Hospital, is as follows: Micro.—Infiltrating mammary carcinoma, grade 2, metastatic to large lymph node in axilla. Tumor has an alveolar papillary structure. Cells have an abundant eosinophilic cytoplasm. Tumor and breast tissue show no changes attributed to testosterone therapy.

Post-operative, injections of testosterone propionate were continued at the rate of 75 mgms. twice weekly and have been continued at this rate up to the present (except for a period of two weeks when due to short supply it was reduced to 50 mgms. twice weekly).

There has been definite evidence of masculinizing effect—progressive in the first months of treatment but not proceeding beyond a fixed level. This was manifest by the cessation of menstruation—abruptly but without menopausal symptoms—by a fine growth of hair about the face and by a noticeable deepening of the voice which fortunately has not progressed beyond a pitch attained upon about three months of treatment.

The general feeling of well being has markedly improved and to the present date has been sustained. She has gained 10 pounds since the beginning of treatment, the cough and blood stained sputum gradually disappeared and are now not noted. She is carrying on in her regular employ and at her usual activities.

The following are X-ray reports by Dr. A. E. Childe, Radiologist of the Winnipeg General Hospital:

Nov. 27, 1946—There are multiple rounded areas of increased density in both lungs varying between 1.2 cm. and 0.7 cm. in diameter, no doubt metastases.

Feb. 11, 1947—The areas of increased density previously noted have almost completely disappeared.

March 19, 1947—There has been no change since the last examination.

April 22, 1947—The lungs are very much clearer than they were at the first examination but there is now a strong suggestion of early re-appearance of the metastases.

There has been notable improvement in the radiological appearance of the lungs coincidental with the early pre and post-operative administration of testosterone. The last X-ray, however, shows some progression of the metastases and it appears as though the improvement will prove to be only temporary. However, it is worth recording definite objective incidence of the disappearance of pulmonary metastases during a part of this patient's course. It may or may not be significant that the improvement took place during the interval of time that the masculinizing effects were in the process of becoming established and that the metastases appear to grow again when this period of active change of hormonal state is achieved—in other words, when an endocrine equilibrium is again reached.

Obviously, further study both in the laboratory and clinic is required. But there is already considerable evidence that testosterone propionate is an active agent capable of affecting the natural course of carcinoma of the breast.

### Conclusions

(1) There is sound experimental and clinical evidence that testosterone retards the natural growth of breast carcinoma.

(2) A case is presented showing evidence of a favorable effect on radiological appearance of pulmonary metastases from a breast carcinoma.

(3) This effect is coincidental with the process of active masculinization.

## Surgery in the Tropics

Dr. F. A. B. Sheppard, O.B.E.

Professor of Surgery, Madras Medical College,  
Madras, India

**Note:** Dr. Sheppard received his undergraduate medical training in Melbourne, Australia, and practiced for seven years in that country. After some time spent in post-graduate surgical training in England he joined the Indian medical service

and has been engaged in surgical practice and teaching in that country until the present time. He became a Fellow of the Royal College of Surgeons, Edinburgh, in 1935. Since 1940 he has been Professor of Surgery in India's largest medical college at Madras.

Dr. Sheppard divided his remarks into two groups:

### 1. Surgical Problems Incident to the Country and People and the Environment of Surgical Practice

India is a country with a population of approximately 420 million. In this population there are only approximately 50 capable surgeons. This ratio would compare with 1 to 2 surgeons in the whole of Canada. This provides a tremendous volume of surgical work. The Madras presidency has a population of approximately 70 thousand.

The temperature varies between a minimum of 90 degrees in the cool weather to a minimum of 100 degrees in the hot weather; the humidity is constant at slightly less than 100%, reaching 100% during the monsoons. Air conditioning is not provided.

This province is the most enlightened and all its hospitals are government owned. The General Hospital of 11,000 beds was founded in 1652 by Yale, when America was a British colony. There are three medical colleges in the province; the Madras medical college is the oldest and largest and admits approximately 150 students per year.

The patients seen in practice in this area are all poor and debilitated with avitaminosis, hypoproteinemia and anemia, all of which result from a combination of hookworm disease and poor diet. An analysis of 650 cases of stomach disorder completed by Dr. Sheppard and his wife in 1939 showed that the average family had four members, with an income of approximately 10 cents a day. The diet consisted chiefly of coarse grains with additional leafy vegetables, potatoes, onions, etc., in small amounts; rice was scarce and expensive, and fish and meat were rarely served. Two meals a day are routine.

The practice of touting is widespread. The majority of practicing physicians and surgeons employ one or more persons who frequent railway stations, hospital entrances and similar points of contact for the purpose of approaching prospective patients and inducing them to attend their respective employers. The seriously ill lists which are posted in the out-patient department of the hospitals are used by the general public when making their choice of a doctor.

Heat stroke and heat exhaustion are a constant threat in all surgical cases. The treatment of surgical shock with blood is difficult for several reasons; people of the Hindu faith do not subscribe to treatment of sick or injured persons and are

equally reticent about receiving transfusions. The situation has improved somewhat since transfusions are paid for. Careful pre and post-operative care, combined with careful surgery, bring adequate treatment to most surgical cases.

### 2. Diseases of Particular Interest

A. Diseases with increased incidence in the tropics were noted as follows:

(1) Carcinoma of the tongue and floor of the mouth is very common and is thought to result from the widespread practice of betel-nut chewing and chewing of local tobacco. Low-caste women make a practice of smoking cheroots, placing the burning end in the mouth; these women commonly present a carcinoma of the palate.

(2) Carcinoma of the penis, seen almost exclusively in Hindus who do not practice circumcision.

(3) Carcinoma of the breast.

(4) Carcinoma of the cervix, resulting from chronic infection subsequent to multiple births and extremely poor obstetrical practice on the part of the mid-wives.

(5) Bone tumors, including osteogenic sarcoma, chondrosarcoma, Ewing's tumor and osteoclastomas.

(6) Von Recklinghausen's disease of the skin.

(7) Tuberculosis of lungs, bones, joints, glands and genito-urinary system and gastro-intestinal system are all common. Gastro-intestinal tuberculosis is apparently primary since no lesions are found elsewhere; it commonly affects the lower ileum and ileo-caecal region, producing a hypertrophic lesion with ulceration. Since bovine tuberculosis is rare in India and all milk is boiled before use, gastro-intestinal infection is not thought to be of the bovine type. Widespread tuberculous infection is aggravated by lack of sanatoria and by the practices of quacks which abound and are encouraged by the new National Government.

B. Diseases peculiar to the tropics.

Since many people of non-tropical countries saw war service in India and other tropical climes they may return with a legacy of tropical diseases. Some of the common diseases are noted as follows:

(1) Filariasis, resulting in lymphoedema of legs, external genitals, breast, etc. Hydrocele is a common result of Filarial infection. Filariasis of the epididymis may mimic exactly the craggy, irregular outline and beading of the vas deferens found in tuberculous epididymitis.

(2) Round worm infection of the gastro-intestinal tract presents a major problem in differential diagnosis, as it may mimic tabes mesenterica, appendicitis, etc., and may produce obstruction of the lower ileum, requiring surgical removal of the worms. Infection of the biliary

passages may reproduce symptoms of cholecystitis or other hepatic disease.

(3) Lymphogranuloma produces a problem of extreme difficulty, particularly as an infection of the rectum where it produces a long tubular stricture. The only satisfactory treatment is excision of the rectum which is very difficult to accomplish.

(4) Amoebiasis. This infection is widespread and is a constant problem either alone or complicating other diseases. In the acute form it may mimic appendicitis and in the chronic it may produce lesions of the colon difficult to distinguish from carcinoma even at operation. In the liver an acute amoebic hepatitis is difficult to distinguish from a perforated peptic ulcer, acute cholecystitis or perinephric abscess; it may also reproduce symptoms of pleurisy, pneumonia or lung abscess. The chronic liver infection must be distinguished from gummata and hydatid disease.

(5) Benign tertian malaria may produce symptoms almost indistinguishable from those of acute appendicitis.

In closing Dr. Sheppard mentioned the extreme difficulty of rural practice in India as compared with that in Manitoba. He also mentioned some medical problems which had developed with the rise of the National Government in India. As in other fields Gandhi is trying to return to older forms of medical practice, and the ancient systems of Hindu and Mohammedan medicine are being re-instituted. These amount to quackery. The National Government has recently instituted legislation permitting students of this type of practice to be admitted to qualified medical colleges to study anatomy and other subjects. The position of the teaching staff who agree to this new rule has not yet been defined by the General Medical Council of Great Britain.

## Some Current Concepts in Vascular Diseases

Dr. R. E. Beamish

A report of a recent presentation of this subject attended by Dr. Beamish at the Mayo Foundation, Rochester, Minnesota. The subject was divided into two broad fields: (1) Peripheral Vascular Disease. (2) Hypertension and Arteriosclerosis.

### Peripheral Vascular Disease

It was noted that the capillary is the ultimate functional unit of the vascular system, the heart and larger vessels being subservient to it.

### Deep Thrombophlebitis of the Leg

Femoral ligation is no longer the treatment of choice, first of all because the surgeon can't be certain of placing the ligature above the throm-

bus and, secondly, only 6% of all cases of deep thrombophlebitis of the calf result in fatal pulmonary emboli. Therefore, routine ligation of all cases is considered excessive. Thirdly, although either ligation alone or thrombophlebitis alone is followed by very few cases of residual venous insufficiency, when ligation is superimposed on thrombophlebitis the incidence of venous insufficiency in the end result is considerably increased.

The present routine treatment is as follows:

(1) Simultaneous administration of oral dicoumarol and intravenous heparin. Heparin, 50 mgms. is given intravenously o.h. 4 until the prothrombin time has been prolonged by the dicoumarol; the elevated prothrombin time is then maintained by the use of dicoumarol alone.

(2) Rest, with the affected limb or limbs elevated at an angle of 30 degrees.

(3) Heat, applied as hot, moist compresses.

(4) Ligation is used only in those cases where anti-coagulants are contra-indicated, e.g., hepatic or renal insufficiency, purpura, or in a case of recent surgery where haemorrhage is a threat.

### Sudden Arterial Occlusion

The commonest causes of this condition are (1) embolus arising from auricular fibrillation or recent myocardial infarction and (2) thrombosis due to arteriosclerosis. Since only 50% of cases present a typical clinical picture at onset, the importance of recognizing the atypical cases is emphasized, particularly in view of the necessity of early treatment. The current concept of treatment is based on the fact that damage to the affected part arises not as a result of the occlusion of the vessel but as a result of spasm in the collateral circulation to the part. Treatment is outlined as follows:

(1) Opiates as required for pain.

(2) Papavarine, grs.  $\frac{1}{2}$  to grs.  $\frac{3}{4}$ , injected into the affected artery proximal to the site of occlusion.

(3) Anti-coagulants given according to the routine noted above.

(4) Whiskey in small amounts to promote vasodilatation.

(5) The patient may be placed in a heated room, the optimal temperature being 92 degrees F.

(6) Surgical consultation should be obtained as early as possible because of the possibility of embolectomy becoming necessary.

With the use of this routine, embolectomy is very rarely necessary but it is advised if no improvement occurs after three to four hours of treatment.

There are several common mistakes in the treatment of this condition:

(1) As noted above, 50% of these cases do not present a typical clinical picture at onset. There-



fore, many of them are complicated by late recognition at a time when tissue damage has progressed to a marked degree.

(2) Elevation of the limb is incorrectly employed. Since the blood supply is already occluded the horizontal or dependent position is indicated.

(3) Heat should not be used, as tissue metabolism is in a precarious state and heat may produce excessive damage.

### Coronary Disease

The use of anti-coagulants in the treatment of coronary disease with and without complications was mentioned. The work of Dr. I. S. Wright in this field has already been summarized in the February, 1947, issue of the Manitoba Medical Review. The possible use of anti-coagulants as a preventative measure in cases of progressive coronary insufficiency is being investigated.

### Hypertension and Arteriosclerosis

This group of diseases is responsible for three times as many deaths as malignant tumors, and its incidence as a cause of death beyond 25 years of age increases at the rate of 10% per year. Dr. Edgar Allen gave his opinion that hypertension is not a consequence of age or mode of life but that it will eventually fall into the group of preventable or curable diseases. It is now possible to treat

successfully a small per centage of hypertensive diseases, e.g. (1) coarctation of the aorta, (2) unilateral renal disease, (3) pheochromocytoma, (4) possibly certain cases of hypertension which respond to sympathectomy.

Dr. Irvine Page is resuming his experimental work on the use of renal extracts in hypertension. He also presented a report on intra-arterial transfusion. There is experimental evidence to the effect that transfusions of this type provide early perfusion of vital organs without overloading an already congested venous system.

The use of tetra-ethyl-ammonium in choosing suitable cases of hypertension for treatment by sympathectomy is noted.

The work of Dr. W. Kempner, of Duke University, on the use of a rigid diet, consisting chiefly of rice and fruit juices as a corrective for metabolic disturbance of the kidney associated with hypertension, was reported. The results to date are startling but controlled experiments have not been completed.

The use of rutin as a preventative against haemorrhage in hypertension was reviewed. It is not certain that haemorrhages occurring in hypertensive patients are due entirely to capillary fragility; therefore the use of rutin awaits further controlled investigation.

## Early Disruption of Operative Wounds

Dr. K. R. Trueman

Dr. Trueman reviewed the recent literature with respect to this subject and presented an analysis of 18 cases of wounds requiring secondary suture from the files of the Winnipeg General Hospital.

Number of Cases of Secondary Suture	18
Site of Incisions:	
(a) Upper Abdomen	13
(b) Mid-abdomen (Transverse 2)	3
(c) Lower Abdomen	2
Days of Disruption Post-Op.	3-39
Mortality	6 (33-1/3%)
Cause:	
(a) Pulmonary Embolus	3
(b) Myocardial Infarct	1
(c) Peritonitis	1
(d) Uncertain	1

The mortality in this series corresponds closely to the overall mortality of all series reported in the literature.

The causes of early disruption of operative wounds were discussed as follows:

- (1) Poor technique when approximating wound edges.
- (2) Defective suture material. The type of

suture material is probably not of much importance.

(3) Until recently anaesthetic difficulties, producing difficult closure of operative wounds. This factor is now minimal.

(4) Factors increasing tension on the wound.

A. Gastro-intestinal distension. This is now well controlled by suction.

B. Hiccough.

C. Cough.

(5) Obesity of the patient. This is a factor only in emergency work, since cases of an elective nature may be substantially reduced in weight pre-operatively.

(6) The site of incision. Incisions in the upper abdomen are exposed to greater tension by reason of movements associated with respiration, cough and vomiting.

(7) General metabolic causes. Dr. Trueman reviewed briefly the work of Collip in 1935. He postulated a general factor as the chief cause of wound disruption. He also mentioned the work of Clark in 1919 who observed improved wound healing in dogs on a high protein diet. He then reviewed the work of Ravdin and McRae, of Philadelphia, who in 1935 confirmed the importance of hypoproteinemia, dehydration and anaemia as

major factors in the etiology of defective wound healing. It was noted that dehydration is of added importance since it may mask a hypoproteinemia.

#### Signs and Symptoms of Wound Disruption

(1) Pain persisting in the wound area after the first one or two post-operative days.

(2) Thin, pinkish, sanguinous discharge escaping from a small skin defect. This is an early sign and is present in almost every case. If this warning is noted adequate taping may prevent complete dehiscence. But it should be remembered that an intact skin does not mean an intact abdominal wall, since the skin layer is always the last to separate.

#### Treatment

(1) Relieve pain and anxiety as necessary.

(2) Relieve shock by intravenous fluid, plasma or blood, as indicated.

(3) The patient should be moved to the operating room in his own bed.

(4) Deep anaesthesia is not required. Some workers prefer spinal, while in other cases a combination of intravenous pentothal and 1% novocaine injected locally provides adequate anaesthesia.

(5) Abdominal contents are replaced under sterile conditions, and only then is any antiseptic applied to the skin.

(6) Closure of the abdominal wall is carried out with the usual draping and aseptic technique. The type of suture material is unimportant. Dr. Trueman outlined one satisfactory technique of closure which involved partial figure of eight sutures tied over a Weatherby plate or buttons.

If operative closure of the wound is not feasible, replacement of abdominal contents and taping of the abdominal wall is desirable. It will most probably result in an incisional hernia and increased morbidity, but in cases of increased risk it will do much to reduce mortality.

## Medico-Historical

### Dr. Adams of Banchory

We little thought when, a few weeks ago, we introduced some suggestions from Dr. Adams as to the propriety of instituting in our universities a chair of medical history, by calling him the most learned of Scottish physicians, that we should soon have to change "is" into was.

When we last saw him, though he looked older than his years, and weather-worn, he was full of vigour and of heart, and seemed to have in him many days of victorious study.

To see so much energy and understanding cut sheer through in its full current, not dwindling away by natural waste, is little less startling than it would be to see his own silver and impetuous Dee, one moment rolling in ample volume, and the next vanished. For, common though it be, there is nothing more strange, nothing, in a certain true sense, more against nature, than the sudden extinguishment of so much intellect, knowledge, and force.

Dr. Adams was not a mere scholar, not merely patient, ingenious, and perspicacious in the study of language. His was likewise a robust, hardy eager nature, hungering after knowledge of every sort, and in the structure of his mind and its bent more like the Scaligers and Bentleys of old than the mighty but mere word-mongers among the Germans. He was made of the same tough and fervid material as were George Buchanan and Florence Wilson, Andrew Melville, and the huge, turbulent, and intrepid Dempster, men who were great scholars, and a great deal more; shrewd, and full of public spirit, men of affairs as well as of letters.

It is this intermixture of shrewdness and favour with hard-headedness and patient endurance of mental toil, so peculiarly Scotch in its quality and in its flavour, which makes a man like the country surgeon of Banchory-Ternan worthy of more than a passing notice.

Francis Adams was born in the parish of Lumphanan on Deeside. His father was a gardener, and his elder brother is still a farmer in that parish.

In a memorandum of his literary life now before us, he says: "As far as I can think, my classical bent was owing to a friendship which I formed, when about fifteen years old, with a young man a few years older than myself, who had enjoyed the benefits of an excellent education at Montrose, which gave him a superiority over myself that roused me to emulation.

"In my early years I had been shamefully mistaught. I began by devoting seventeen hours a day to the study of Virgil and Horace, and it will be readily believed that such intense application soon made up for any early deficiencies.

"I read each of these six or seven times in succession. Having mastered the difficulties of Latin literature, I naturally turned my attention to Greek as being the prototype of the other.

"It was the late Dr. Kerr, of Aberdeen, who drew my attention to the Greek literature of medicine, and at his death I purchased a pretty fair collection of the Greek medical authors which he had made. However, I have also read almost every Greek work which has come down to us from antiquity, with the exception of the ecclesiastical writers; all the poets, historians, philosophers

orators, writers of science, novelists, and so forth. My ambition always was to combine extensive knowledge of my profession with extensive erudition."

This was no ordinary boy of fifteen who could, *ex proprio motu*, work seventeen hours a day to make up to his friend.

He settled early in life in the beautiful and secluded village of Banchory-Ternan, to use his own words, "with its glassy river and magnificent hills rising in front and behind like another Tempe, with its Peneus flowing between Ossa and Olympus." Here he spent his days in the arduous and useful profession of a country surgeon, out in all weathers and at all hours, having the lives, the births, and the deaths of a wild outlying region on his hands. This work he did so thoroughly that no one could, with a shadow of justice, say that his learning lessened his readiness and his ability for the active duties of his calling, in the full round of its requirements. He was an attentive, resolute, wise practitioner, just such a man as we would like to fall into the hands of, were we needing his help. He was always up to the newest knowledge of the time, but never a slave

to any system, or addicted to swear by any master. The whole cast of his mind was thoroughly free and self-sustained. If he had any idols, they were among the mighty and the dead; but even they were his companions and familiar daimons, rather than his gods.

Nothing can better illustrate his keen appetite for knowledge of all sorts than this curious and touching record of his own observations on the birds of Banchory, and his son's on those of Cashmere. You see what a quick and loving eye the father had kept, during his busy and learned life, upon the natural objects he met with in his rides, and the training he had given his son in such studies at home, which enabled him to turn his Indian observations to good account. This modest but remarkable paper contains not only the ornithological notes, but an admirable pleading for this department of natural history as a branch of liberal education, and a valuable gymnastic for the senses and the mind, and ends with an eloquent, and we think well-founded protest, against the scientific ultraism of the day, the useful information, and cramming mania.

Brown, "Dr. Adams, of Banchory."

## Book Reviews

### Malariaology

"Million-murdering Death" was the synonym Sir Ronald Ross applied to malaria. Even today with all our knowledge upon the subject there are each year 3,000,000 deaths and 300,000,000 sufferers from malaria. Most of these occur far from our shores but one of the penalties of living in a world of speed is the ease with which enemies to our health can reach us from the most distant lands. The mosquito which today inhabits the jungle of Africa or Malaya may tomorrow be feeding upon someone on our own continent. Thus the menace of malaria is great even to us.

No organism or parasite exists which has so long and so tremendous a record of destruction. Not only individuals but empires have crumpled under the attacks of the almost weightless mosquito. It has devastated otherwise fertile regions. It has destroyed whole peoples not with the speed of plague but with a deliberate, persistent and relentless perseverance that incapacitates long before it kills.

From the earliest times the existence and effects of malaria have been well known. Hippocrates, Plato and others of the ancients wrote about the various types of malarial fevers. The will of the gods was deemed the cause by Cicero and, for long after him, by the devout of many faiths,

The first advance in knowledge came with the discovery of the value of cinchona bark in 1630 or there by. The name "malaria" dates, in English, to 1740 when the disease was referred to by Horace Walpole. He used the Italian designation which was based on the belief that bad air was the cause of the malady. The first man actually to see the plasmodia was Laveran, a French Army Surgeon, who spent two years at Constantine in Algeria. He discovered what he regarded, and what actually was, the cause of malaria. This was in 1880. Before long others had confirmed his theory.

The organism had been discovered and a cure had been found but the vector was still unknown. This part of the problem was solved by two Scotsmen—Sir Patrick Manson and Sir Ronald Ross. It was Ross who first actually saw the developing parasite in the stomach-wall of the mosquito, a discovery which stirred the poetic Ross to celebrate his epoch-making achievement in verse.

Many workers now carried on the investigation, and among the greatest of these was William Granford Gorgas who made possible the building of the Panama Canal. In 1906 the hospital admissions for malaria were 1,263 per 1,000 of population. In 1913 the rate had fallen to 76 per thousand. When seven years later Gorgas lay ill in London, the King did him the honor of visit-



ing him and conferring upon him a Knighthood.

Since then there has been no let up in the war upon the mosquito and its deadly parasite. Synthetic drugs have been added to natural remedies. Old and simple, and new and complicated methods have been applied all over the world in an effort to destroy the vector as the best way of destroying the disease. Over the years extensive work has been done in the laboratory in the field, at the bedside. The parasite, the vector, the host, the community have all been intensively studied. How great this work has been, how minute and painstaking have been the investigations, can be appreciated by a reading of this encyclopedia of malariology. It is, of course, primarily for those who are immediately concerned with the subject. But it contains so much interesting information that it will entertain and instruct all who read it. It is the documented record of great achievement in every department of the subject but behind it all we must see these

300,000,000 sufferers and the 3,000,000 dead, and fast flying planes carrying as stowaways the plagues of the jungle. With that as background we read it with greater personal interest for in malaria we can see a threat even to ourselves.

**"Practical Malariology,"** by P. F. Russell, M.D., M.P.H., Colonel, M.C., A.U.S., Parasitology Division, the Army Medical School. Field Staff, International Health Division, Rockefeller Foundation (on leave), Luther S. West, Ph.D., head of Biology Department, Northern Michigan College of Education. Major, Sn. C., A.U.S. (Reserve); Formerly Entomologist, Parasitology Division, Army Medical School, Reginald D. Manwell, Sc.D., Professor of Zoology, Syracuse University, New York, formerly Captain, Sn. C., A.U.S., Protozoology Section, Parasitology Division, Army Medical School. 684 pages; 238 illustrations, 8 in color; price, \$9.00. W. B. Saunders Company, Philadelphia and London, 1946. Canadian Agents, McAlinsh and Co. Limited, Toronto, Ontario.

## The Physician's Handbook

The Physician's Handbook is a pocket size volume of 280 pages. It is divided into two parts, the first dealing with Laboratory Diagnosis and the second with Clinical Procedures and Facts. The Laboratory section is very complete. It covers all the usual and some of the less common laboratory procedures. There are tables of normals and tables of findings in disease states, and line drawings of abnormal constituents of the urine, of normal and abnormal blood elements, of microscopic findings in sputum, gastric contents, feces, etc. This section is extremely useful as a guide to the performance of laboratory methods and to the significance of the findings. The second part—Clinical Procedures and Facts—begins with a Clinical History outline. This is followed by a scheme for examination, general, neurological, psychiatric, gynecological, pediatrical and so on. There are numerous tables and diagrams which make the text even more clear. Several of these relate to the nervous system and others to the heart. A good deal of space is given to pre

and post-operative care. Dietary information includes general information and brief descriptions of thirty diets. Vitamins and infant feeding get full consideration. Diabetes and diabetic enginies are treated quite fully.

A valuable feature is a list of useful drugs grouped by their actions and with indications, contraindications, and toxic effects.

There is a wealth of information in this little book which might well be in the pockets of every intern and on the desk of every doctor. At the price—\$1.50—everyone can afford it.

**The Physician's Handbook**, 4th Edition, by J. Warkentin, Ph.D., M.D., and J. D. Large, M.S., M.D.

## Winnipeg Medical Society

### Notice of Increase of Fees

The Annual Membership Fee of the Winnipeg Medical Society has been increased to \$10.00 in place of the previous \$5.00 fee. This increase affects Active Members only.

K. R. Trueman, M.D., Secretary.

## Editorial

J. C. Hossack, M.D., C.M. (Man.), Editor

### Anaesthesiologists

Recently I had the pleasure of attending, and the honour, but not the pleasure, of addressing, a meeting of the local anaesthetists. The occasion was their annual meeting and a good time was enjoyed by all. There was a preliminary loosening of inhibitions by inhibitions of the cup which cheers and which can also, if consulted too frequently, do a spot of inebriating but this undesirable and result was neither sought nor achieved. The cocktail portion of the evening was not, I am informed, a usual proceeding. But this was not a usual meeting for on the day before—Accession Day to be exact—Dr. Lund had acquired the status of pater familias. Although I am not an augurist I can see that Miss Lund is going to grow up into an exceedingly pleasant and considerate lady because although not due to arrive on that day, the booming guns suggested to her that she was the object of celebration and, in order not to disappoint her public, she hurried to show herself to their admiring gaze.

The piece de resistance of the evening was undoubtedly Dr. Huggin's report of her experiences in the United States. To one who had not kept abreast of the advances in anaesthesiology it was full of interest. Anaesthesia is no longer a matter of "pouring ether" just as surgery is no longer a looking for "something in the belly." It has advanced from a novelty to an art and now to a science which requires a knowledge of many things other than the signs of ether saturation. Just as the anaesthetist made surgery humane so has the anaesthesiologist made it safer than even Lister left it. The choice of agent, the pre- and post-operative care of the patient are matters in which the anaesthesiologist has a large and important say to the greater comfort of surgeon and patient alike.

The audience, also, impressed me. Here were twenty men and women all young (including Drs. Grant and Aikenhead), all enthusiastic, all absorbed in their important subject, engaged in the discussion of the most beneficent part of treatment—the means whereby even the slightest dangers and discomforts of surgery might be abolished. How the ancient humanitarians would have been thrilled could they have listened; they who had sought so long and so fruitlessly for some drowsy syrup to steep the senses in forgetfulness. The dreams of old men had come true and the visions of young men were materializing in a science only a hundred years older than little Miss Lund.

I thought how fortunate were the patients and

surgeons who had at their disposal such competent assistance. But there is a fly in the ointment; there is ominous writing visible upon the wall—that competent assistance may not always be at hand. In Winnipeg, I am told, anaesthetists are more poorly paid than anywhere on the continent. It is tempting Providence to let that state of affairs persist. The offer of a salary two or three times larger is hard to resist, is scarcely likely to be resisted. This was not a topic of the meeting but under the pressure of circumstances might well come up later. Meanwhile under the inspiring and enthusiastic leadership of Dr. Lund anaesthesiology in Winnipeg is growing in importance and, thanks to him, our publication stands unique in the space it devotes to the subject.

### The Convention

For the past many months we have been hard at work on plans for the Convention. For the past few months we have been calling from our house-tops a welcome to our colleagues east and west. Now it is time for us to descend so that we may be ready to greet them upon our thresholds. We have told those who did not know, and reminded those who did know, about our spirit and our people. When our guests arrive they will find that we wrote without exaggeration. To us the Convention is an opportunity not only to receive instruction but also to furnish the amenities which will make their visit memorable to our guests. We are glad to have them with us and, when they leave, we want them to be glad that they came.

### The Society Editor

For some years Mr. Whitley has added to his other duties that of Society Editor. But Mr. Whitley has his limitations. Moreover he once committed the faux pas of congratulating a chiropractor on the birth of a child. This was not altogether Mr. Whitley's fault because the latest Register of Members of the Manitoba C.P. & S. was compiled so long ago that half the pages are missing and the rest are out of date.

Now Mr. Whitley is being replaced with our thanks for his past services and his thanks for being replaced. His successor is genial Kay Borthwick Leslie, a lady, like Yorick, of infinite jest who, in modern parlance, is a sharp cookie who gets around. She is determined to make a good job even if it means eavesdropping on corridor conversations. (If you don't get the point you didn't read her May page). Give her all the help you can and don't mind if she eavesdrops, I've got a blue pencil.

## Dinner and Floor Show

A complimentary Dinner and Floor Show is being given by the Manitoba Medical Division, to the Members of the Council of the Canadian Medical Association (and ladies) on the occasion of the 78th Annual Meeting of the Canadian Medical Association, on Tuesday, June 24, 1947, at 6.30 p.m., Royal Alexandra Hotel, Winnipeg. Tickets are limited and are \$5.00 a plate. Kindly apply before June 17th to the Secretary, Manitoba Medical Association, 604 Medical Arts Building, or to the members of staff of the various hospitals. Brandon General Hospital—W. S. Peters, R. P. Cromarty.

Grace Hospital—Walter Tisdale, Arthur Hogg.

Deer Lodge Hospital—A. C. Rumball.

St. Boniface Hospital—P. H. McNulty, Roy Richardson, Abraham Hollenberg.

St. Joseph's Hospital—J. A. McDougall.

Winnipeg General Hospital—D. C. Aikenhead, Elinor Black.

Misericordia Hospital—Grant Beaton, O. C. Trainor.

## The Winnipeg Medical Society Benevolent Fund

The President of the Winnipeg Medical Society, Dr. W. F. Tisdale, has conceived the happy idea of a Winnipeg Medical Society Benevolent Fund. The Society now has a membership of some five hundred, and it is felt that a group of this size with a fine tradition of service—scientific, economic and social—should possess a fund not dependent on annual dues which might be used for benevolent and educational purposes.

In a society of this size it cannot be denied that we have many members who are affluent, but neither can it be concealed that others are in less happy circumstances through no fault of their own. In the past there have been instances of destitution either of practitioners themselves or of their families after the death of the breadwinner. There will also be cases of members of Society who need financial help and yet would not be willing to accept a gift. In such cases loans might be made without interest, the capital to be repaid within a stated interval agreed upon at the time by the trustees of the fund and the recipient of the loan. The Society sponsors the Gordon Bell Memorial Lecture, gives an annual grant to the Medical Library for the purchase of new books, and from time to time has defrayed, or helped to defray, the expenses of visiting speakers. All these objects might be a fair charge on the proposed Benevolent Fund.

At the regular meeting of the Winnipeg Medical Society on April 18 the Society went on record

as favoring the setting up of a Benevolent Trust Fund. On motion of Dr. A. M. Goodwin the following members were appointed trustees of the fund: Drs. W. F. Tisdale, P. H. McNulty, Anna Wilson, Gordon Fahrni, Jr., and Ross Mitchell.

It is suggested that at each annual meeting of the Winnipeg Medical Society the chairman of the fund shall submit a report on the record of the past year, and the trustees shall submit an auditor's report, giving the financial position of the fund. Dr. W. F. Abbott has the verbal assurance of Mr. E. W. Lowery, inspector of Income Tax, that donations to the fund may be deducted from income, as are other charitable donations. The trustees undertake to present to Mr. Lowery in writing the aims, objects and provisions of the fund, so that he may confirm by letter the assurance given verbally. This has now been received.

There will be no attempt to canvass members of the Society personally to contribute to the Fund. The President has intimated that he wishes to be a contributor. No doubt there will be many others who have been honored by the Society, either by holding office or being elected life members, or by contributing to the scientific program who will wish to aid the fund. The Benevolent Trust Fund of the Society would be a worthy object for bequests from physicians. Wisely administered along the lines of Winnipeg's Foundation Fund, it may endure through the years giving increasing benefits and contributing to the happiness and prosperity of the Winnipeg Medical Society. Members of the Society are urged to contribute to the Fund so far as their circumstances in life may fairly warrant and no matter how small the gift it will be gratefully received and faithfully applied.

R. B. M.

## Lay Directors of Manitoba Medical Service

At the annual meeting of Manitoba Medical Service on March 12, five lay directors of the organization retired because of the expiration of their term of office or through illness, Messrs. Robert McKay, John B. Richardson, F. W. Ross, M. D. Grant and E. Jones. As one who has been associated with Manitoba Medical Services from its inception until his retirement on the above date, the writer is privileged to pay tribute to the fine contribution made by the lay directors mentioned. All were eminent in the fields of banking, insurance and business, each carried heavy responsibilities during the day, yet they rarely failed to attend the evening meetings of the directors; they set an example of punctuality and their wisdom in council especially in matters relating to business, insurance practice and finance was of the greatest value.



Mr. Robert McKay, until stricken by illness, was vice-chairman of the board, and Mr. Jones, Manager of the Bank of Montreal, was a member of the finance committee. The other gentlemen also contributed much to keep the new venture from foundering. Lengthy discussions by the medical members of the board on technical medical problems must sorely have tried their patience, but if so they never showed it. There are no directors fees; there was little, if any, prestige to be gained through being a member of the board, and one wondered what it was that brought them out to meeting after meeting, often of three hours duration. One must conclude that it was only a fine sense of duty and of community spirit that impelled them. They felt that the principle of prepayment of medical services by people in the lower income brackets was sound, and they worked hard to make it a success.

R. B. M.

## Special Exhibit

### Department of Veterans Affairs

The Department of Veterans Affairs have made arrangements to have both fixed and special scientific exhibits to be on display June 24th, 25th and 26th at the Deer Lodge Hospital. Special exhibits will be at stated hours which will be announced later. Included in these exhibits will be Dermatology, Tropical Diseases, Parasitology, Orthopedic Cases, Paraplegic Cases and Rehabilitation Exercises.

Special arrangements will be made for transportation from the Convention Headquarters to the Hospital.

## Bismuth-Diallyl-Acetate Suppositories

According to information received from the United States by the food and drugs division of the Department of National Health and Welfare, a number of fatal poisonings of infants have recently occurred there. The deaths are said to be associated with the use of rectal suppositories for the prevention and treatment of throat infections.

Hon. Paul Martin, Minister of National Health and Welfare, said today that the federal food and drugs division has already taken steps to stop the sale of such products in Canada, and, as an added precaution, is issuing this warning to the medical and pharmaceutical professions.

The number of deaths which have resulted in the United States is somewhat indefinite, as reports of death and injury continue to be received. The total number of reported deaths to date is about 15, some of which have not been completely investigated to determine the exact cause of death.

The active ingredient is bismuth diallyl-acetate (bismuth heptadiene carboxylate). The suppositories are sold in two sizes, namely, adults' and children's, containing respectively 45 mg. and 22.5 mg. of bismuth (as metal) per suppository. The dose for children under six years is one-half children's size suppository. In all instances of injury and death, children under the age of six were affected and apparently whole suppositories, either adults' or children's size, were administered contrary to the directions for use.

Where autopsy was performed, liver damage was almost invariably found, this organ being enlarged and fatty. Toxic quantities of bismuth, however, were not found. It is now believed that any danger in the use of overdoses of the product may be attributable to the organic allyl radical, and also to the narrow margin between therapeutic and toxic doses for infants.

## Accommodation at C.M.A. Meeting To Manitoba Medical Men and Their Wives Outside of Winnipeg

The registration for the 78th Annual Meeting of the Canadian Medical Association in Winnipeg is particularly heavy. Needless to state that hotel accommodation is exceedingly short.

It would greatly facilitate the work of the Committee on Housing and Accommodation if all Manitoba doctors and their wives arranged for private accommodation during the Convention.

We realize we are asking Manitoba doctors to make certain sacrifices with this request; however, as all Manitoba doctors and their wives are joint hosts and hostesses in this great 78th Annual Convention of the C.M.A., your Committee is of the opinion that such sacrifices will be cheerfully borne, as becomes Western hospitality.

## To Manitoba Medical Men and Their Wives in Winnipeg

The Committee on Housing and Accommodation has requested that all Manitoba doctors and their wives make private arrangements for their stay in Winnipeg during the Convention.

The Committee would appreciate it if Winnipeg doctors would offer hospitality in their homes for three days, June 25th, 26th, and 27th. It is suggested that such hospitality consist of bed and breakfast.

In offering accommodation, please state how many guests you are able to take care of.

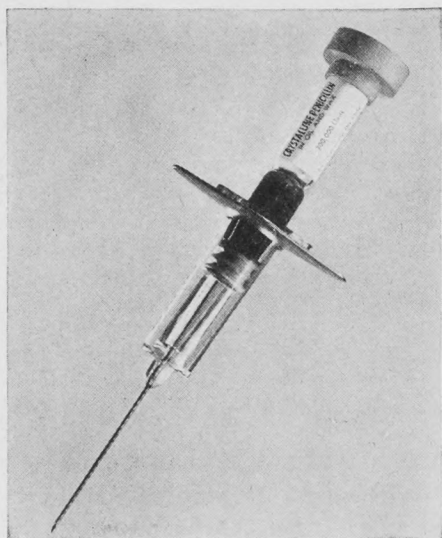
Please reply to 602 Medical Arts Building.

The Committee will not take advantage of private hospitality if hotel accommodation and the Fort Garry Site can house our guests.

D. C. Aikenhead, Chairman,  
Committee on Housing and Equipment.

# CRYSTALLINE PENICILLIN IN OIL AND WAX

(ROMANSKY FORMULA)



Disposable Plastic Syringe

Crystalline sodium penicillin is now used by the Laboratories in the preparation of Penicillin in Oil and Wax (Romansky Formula). The use of this highly purified form of penicillin marks a further advance in the development of an improved product.

**Ease of Administration**—*The improved mixture flows more freely through a hypodermic needle.*

**Minimum of Local Reaction**—*Because of the high purity of the crystalline penicillin in the product, local reactions are reduced to a minimum.*

## AN ADDED CONVENIENCE

For the convenience of members of the medical profession using the B-D\* Metal Cartridge Syringe, a sterile 20-gauge needle is now included in the replacement cartridge package.

## HOW SUPPLIED

### DISPOSABLE PLASTIC SYRINGE PACKAGE

Included in this package is a sterile B-D\* Disposable Cartridge Syringe, ready for immediate use with a special cartridge containing 300,000 International Units of crystalline penicillin in 1 cc. of peanut oil and beeswax. The plastic syringe is discarded after use.

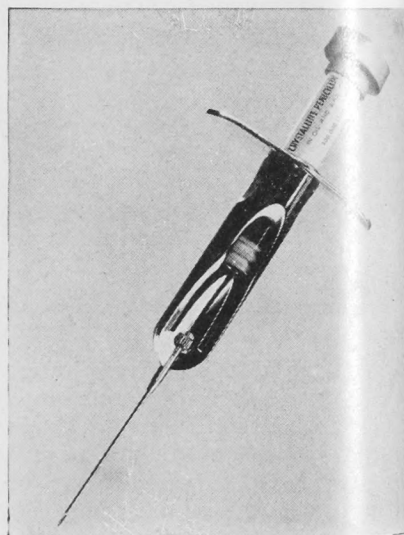
### METAL CARTRIDGE SYRINGE PACKAGE

This package includes a B-D\* Metal Cartridge Syringe, two sterile 20-gauge needles, and a cartridge containing 300,000 International Units of crystalline penicillin in 1 cc. of peanut oil and beeswax. The metal syringe is designed for repeated use with readily changeable needles and cartridges.

### REPLACEMENT CARTRIDGE PACKAGE

Replacement cartridges containing 300,000 International Units of crystalline penicillin in 1 cc. of peanut oil and beeswax are obtainable separately from the Laboratories. These cartridges are supplied for use with the metal cartridge syringe. A sterile 20-gauge needle is supplied with each replacement cartridge.

\*T.M. Reg. Becton, Dickinson & Co.



Metal Cartridge Syringe

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## Association Page

### Our Guests

To the hierarchy of the Executive of the Canadian Medical Association, and the members of General Council, whether veteran or tyro;

To the distinguished speakers from Great Britain, United States of America and Canada who honour us with their presence;

To the general practitioners and specialists who come searching for pearls of wisdom;

To members of the affiliate societies who will sandwich their time between meetings of national organizations and Canadian Medical Association sectional meetings;

To officials of government departments, licensing bodies, non-scientific medical groups;

To those who study the role of economics in relation to the provision of health services, and those whose main concern is adequate control of specific diseases which make life burdensome;

To the ladies—wives and daughters who will lend charm and color where such is definitely needed, and prevent the mere males from taking themselves too seriously;

To the advertisers who contribute generously to the success of this and similar meetings, and whose sole aim is to stimulate your interest in each and every individual product which is the one-and-only-best-there-is-on-the-market

### Our Greetings!



### Manitoba Medical Association

#### Annual Meeting and Complimentary Dinner To C. M. A. General Council

The official annual business meeting of the Manitoba Medical Association will be held in a suitable room, provided by the Committee on Housing, at the Royal Alexandra Hotel, at 2.00 p.m., on the afternoon of Tuesday, June 24th. Committee Reports will be considered by the Executive Committee prior to the Annual Meeting, and it is anticipated that all matters, with the possible exception of Report of the Committee on Economics, Report from the College of Physicians and Surgeons, and Report of the Manitoba Medical Service, may be adequately covered during the afternoon session. Sufficient time for adequate discussion will be afforded.

At 6.30 o'clock on the same evening members of the Manitoba Division and ladies will be hosts to members of Canadian Medical Association General Council and distinguished guests at a complimentary dinner and floor show to be held in the Royal Alexandra Hotel. Notice of the event appears elsewhere in this issue.

### Report of Nominating Committee, Manitoba Medical Association

#### President:

Dr. R. W. Richardson, Winnipeg.

#### 1st Vice-President:

Dr. R. E. Dicks, Dauphin.

Dr. H. S. Evans, Brandon.

#### 2nd Vice-President:

Dr. F. A. L. Mathewson, Winnipeg

Dr. D. L. Scott, Winnipeg.

#### Hon. Secretary:

Dr. A. M. Goodwin, Winnipeg.

Dr. A. R. Tanner, Winnipeg.

#### Hon. Treasurer:

Dr. H. M. Edmison, Winnipeg.

Dr. C. B. Schoemperlen, Winnipeg.

#### Member-at-Large (Winnipeg):

Dr. C. H. A. Walton, Winnipeg.

Dr. F. G. Allison, Winnipeg.

#### Member-at-Large (Rural):

Dr. A. S. Little, Dauphin.

Dr. G. H. Hamlin, Portage la Prairie.

When the Nominating Committee met on March 16th, efforts were made to provide two names for each office. This plan was generally followed, but one name only remained for the office of President after two alternates had declined the nomination.

The above list was approved by the Executive of the Association on April 20th, and appeared in the May issue of the Manitoba Medical Review. According to the Constitution, additional nominations may be made from the floor at the business session of the Annual Meeting.



### Admission To Medical College

Infringement of individual rights and liberties continues to be the topic of discussion among those who are swift to sense the implications. A completed application form for each would-be medico was supposed to have been submitted to the University Registrar by May 1st. An additional form in which the applicant agreed, voluntarily, to practice the science of medicine anywhere in Manitoba for three years immediately after his graduation was supposed to accompany the application form, but was not to be signed until a subsequent agreement or undertaking with the Government of the Province had been read.

The agreement form was not available, and information is to the effect that applicants were "signing blind." Apart altogether from the legal implications, the arrangement is not good. On



May 9th the Winnipeg Tribune front page carried an article entitled "Delayed Forms Balk Students." The following day "M.D." writing to the Editor of the same paper deplored the manner in which the "request" of the Provincial legislature to the Board of Governors of the University of Manitoba for an increase in the number of medical students admitted was being implemented.

On May 12th an excellent editorial appeared in the Winnipeg Tribune under the heading "Medical Student Coercion." In the final paragraph the Minister of Health is advised to "forget all about his little scheme of coercion and proceed otherwise to make the practice of medicine attractive in rural Manitoba."

### Central Medical Society

A meeting of the Portage la Prairie and District Medical Society was held on the 22nd of April at the Hotel Portage. The meeting was well attended by all of the Medical Profession residing in the City and Rural Municipality of Portage la Prairie, as well as Dr. Jubb from MacGregor, and Dr. Ivens from Carberry. The special guests of the evening were Dr. A. E. Childe, Dr. Bruce Chown and Dr. M. T. Macfarland, all of Winnipeg.

Following dinner Dr. Chown gave a very interesting address on Rh factor, outlining methods of sensitization of Rh negative individuals and the possible results of such sensitization. He showed colored lantern slides illustrating clinical forms of erythroblastosis foetalis and outlining the treatment now being used.

Dr. A. E. Childe spoke to the gathering on the subject of protruded intervertebral discs. His address was profusely illustrated with lantern slides demonstrating the technique used and reproduction of X-ray pictures illustrating a great variety of protrusions both in the lumbar and cervical regions.

Dr. Macfarland, Executive Secretary of the M.M.A., very briefly outlined some of the work being carried on at the present time by the Executive of the Association and a few of the problems with which the Association is faced.

### C.M.A. Advisory Committee To Department of Veterans Affairs

The third meeting of this Committee was held on May 7, 1947, in the Medical Arts Club Room. In addition to other members, Dr. R. M. Scott, D.V.A., Saskatoon, attended the meeting. Due to the enforced absence, through illness of Dr. J. Laurie Lamont, D.D.M.O., the cases for discussion were presented by Dr. E. H. Whelpley.

Attention was again drawn to a letter, dated December 16, 1946, from Department of Veterans Affairs over the signature of Departmental District Medical Officer, which was sent to members of the medical profession.

#### "Re: Doctor of Choice Plan Elective X-Ray Procedures"

"It is desired to bring your attention to the Departmental Regulations which require the obtaining of authority from the D.D.M.O. before elective X-Ray procedures may be carried out under the new legislation.

"These include such X-Ray procedures as gastro-intestinal series, x-ray of sinuses, and other elective x-ray procedures.

"This work should be carried out only by recognized specialists in Radiology.

"Thanking you for your co-operation in this matter."

### Vital Statistics Handbook

Attention is drawn to the Preface of the most recent Vital Statistics Handbook containing International List of Causes of Death published by the Dominion Bureau of Statistics, Department of Trade and Commerce, Ottawa (1946), and distributed to all members of the profession in the Province by the Division of Statistics, Department of Health and Public Welfare.

Attention is also drawn to the notation on the left-hand border of the Form 4 "Official Notice of A Live Birth" and Form 5 "Official Registration of Death" which says "Write plainly with unfading ink. This is a permanent record."

### Brandon and District Medical Association

The Annual Meeting was held at the Brandon General Hospital on Wednesday, May 14th, 1947. Following a sumptuous repast arranged under the direction of the Superintendent, Dr. G. W. J. Fiddes, and Miss Olive Thomas, Superintendent of Nurses, Dr. R. J. Martin, President, and Dr. M. T. Macfarland, Executive Secretary, Manitoba Medical Association, spoke briefly.

Dr. Harry Medovy, Winnipeg, discussed Paediatric Problems including Cyanosis in Infants and Children, Intussusception, and Tetralogy of Fallot.

Dr. A. L. Paine, Ninette, discussed "Recent Developments in B.C.G. Inoculation," and Dr. H. S. Evans discussed "Lung Abscess" which he illustrated with Case Presentation.

Dr. A. L. Paine was named President, and Dr. J. B. Baker, Secretary of the Association for the year 1947-48.

A vote of thanks to the hosts was moved by Dr. J. M. Matheson. M. T. MacFarland.

## Personal Notes and Social News

Reported by K. Borthwick Leslie

The marriage of Edith Hemingson to Dr. Christopher Moore took place Saturday, May 10th. Following a wedding trip to Mexico and California, the young couple will reside in Winnipeg.

Dr. and Mrs. N. W. Warner announce the birth of Catherine on May 1st.

Dr. and Mrs. J. N. Lederman (nee Dr. Harriet Perry), announce the birth of John McDonald Lederman, May 3rd.

Dr. and Mrs. E. K. Vann, St. James, announce the birth of a son, May 2nd.

Dr. and Mrs. Peere Lund are receiving congratulations re the birth of a daughter on May 13th. The members of the Anaesthetists' Association enjoyed the cigars and chocolates at their "windup" dinner, Peere.

Dr. and Mrs. W. C. Guest announce the birth of a daughter on May 3rd.

Dr. and Mrs. J. D'Arcy Bruce, North Bay, Ontario, announce the birth of a daughter on May 10th.

Dr. and Mrs. F. W. Jones announce the birth of a son, Christopher, on May 12th.

Dr. and Mrs. R. P. Bellamy (nee Capt. Lorna Whish, R.C.A.M.C.), Nanton, Alberta, are receiving congratulations on the arrival of their son.

Capt. and Mrs. J. P. Nadeau, Fort Osborne Military Hospital, announce the arrival of their son on May 16th.

Drs. W. M. Musgrove, Gilbert and Emma Adamson left during the week for New York to attend the American Psychiatric Convention.

Birthday congratulations to Dr. Murdoch MacKay, Transcona, born April 30, 1884.

Dr. and Mrs. Rady announce the engagement of their daughter, Evelyn, to Thomas Olenick. The wedding is planned for Wednesday, June 11.

Dr. Bruce Chown is just back from attending the American Pediatrics Society in Stockbridge, Mass., via New York, Boston and Montreal. He reports a most enjoyable and instructive trip. We will be hearing more re the instructive session but at present the gardens are wonderful. In Montreal he saw Dr. Margaret Pratt, post-graduate student in Anaesthesiology, and Dr. "Wiggy" Wigglesworth, Pathologist, both in the Children's Memorial Hospital. Both very busy and doing excellent work.

Those of you remembering Dr. Blake Watson, formerly of Winnipeg, now of Los Angeles, California, will join me, I am sure, in extending our sincere sympathy to Blake and Mrs. Watson on the tragic loss of their small son.

Dr. and Mrs. K. R. Johnson, of Gimli, Man., announce the arrival of Stafan William, May 15th, 1947. Baby brother for Margaret and Linda.

Dr. and Mrs. Kenneth Davidson announce the arrival of their daughter on May 14th, 1947.

Congratulations to the four Veterans, Drs. W. B. MacKinnon, J. H. Moir, M. P. Merkeley and B. E. Loadman, on receiving their Master of Surgery Degrees. Good luck for the future.

Doctor and Mrs. H. V. Waldon, of Vita, were the guests of honor at a celebration held by the people of Vita and neighboring communities on May 17th. Led by the Dominion City band, a parade of children, large and small, who had been brought into the world by Dr. Waldon, marched to the hospital and escorted the couple to the Vita Community Hall. There several speakers, representing each community of Dr. Waldon's territory from Dominion City to Piney, thanked Dr. Waldon for his twenty years' service in the district. They spoke of his professional skill and kindness, his personal self-sacrifice, his persistence despite fatigue and ill-health, his long, lonely, arduous trips into the country. But equally they remembered his unstinting help in all the problems of a remote community, which has brought him to be guide, philosopher and friend to all. As one representative said, "Rarely has so much good been done by one man to so many."

The last address was read by Miss Gladys Rasmussen, who was the first baby delivered by Dr. Waldon in this district. She presented him with the keys to a new Hudson, the gift of friends throughout his territory.

D. B. S.



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## SEVENTY-EIGHTH ANNUAL MEETING

of the

**Canadian Medical Association**

ROYAL ALEXANDRA HOTEL, WINNIPEG, JUNE 23, 24, 25, 26, 27, 1947

## SCIENTIFIC PROGRAM

Wednesday, June 25

## ROUND TABLE CONFERENCES

9.00 - 10.30 a.m.

**Anæsthesia****Anæsthesia for the Occasional Anaesthetist.**

- Dr. D. C. Aikenhead, Winnipeg, Chairman.
- Dr. Walter S. Johns, Calgary.
- Dr. J. Brener, Winnipeg.
- Dr. D. Huggins, Winnipeg.
- Dr. D. Revell, Winnipeg.
- Dr. J. Watts, Edmonton.

**Dermatology****Seborrhoeic Dermatitis.**

- Dr. Norman Wrong, Toronto, Chairman.
- Dr. Paul O'Leary, Rochester.
- Dr. A. M. Davidson, Winnipeg.
- Dr. Harold Orr, Edmonton.
- Dr. H. E. Cleveland, Vancouver.
- Dr. G. S. Williamson, Ottawa.

**Medicine and Surgery****The Management of Hypertension.**

- Dr. J. D. Adamson, Winnipeg and
- Dr. A. C. Abbott, Winnipeg, Chairmen.
- Dr. L. DeWitt Wilcox, London.
- Dr. Donald McEachern, Montreal.
- Dr. K. G. McKenzie, Toronto.

**Obstetrics and Gynæcology****Caesarean Section—the indications and contraindications.**

- Dr. W. P. Tew, London, Chairman.
- Dr. G. M. White, Saint John.
- Dr. A. B. Nash, Victoria.
- Dr. F. G. McGuinness, Winnipeg.
- Dr. L. T. Armstrong, Toronto.
- Dr. J. S. Henry, Montreal.

**Ophthalmology****Ocular Injuries.**

- Dr. N. L. Elvin, Winnipeg.
- Dr. J. T. Cruise, Winnipeg.
- Dr. E. A. McCusker, Regina.
- Dr. R. O. McDiarmid, Brandon.
- Dr. E. L. Moyer, Moose Jaw.

**Pædiatrics and Otolaryngology****The Management of Bulbar Poliomyelitis.**

- Dr. Harry Medovy, Winnipeg, Chairman.
- Dr. E. J. Huenekens, Minneapolis.
- Dr. R. E. Priest, Minneapolis.
- Dr. A. B. Baker, Minneapolis.
- Dr. Alan Ross, Montreal.
- Dr. Robert Black, Winnipeg.

**Psychiatry**

Treatment in D.V.A. Hospitals — Rehabilitation of Psychiatric cases, including experience with sub-shock, insulin, indications, mode of action results, etc.

- Dr. W. M. Musgrove, Winnipeg, Chairman.
- Dr. T. E. Dancey, Montreal.
- Dr. Gordon Hutton, Vancouver.

**Radiology****Röntgen Therapy in the Treatment of Arthritis.**

- Dr. J. C. McMillan, Winnipeg, Chairman.
- Dr. W. T. Dingle, Winnipeg.
- Dr. H. W. Riley, Winnipeg.
- Dr. G. H. Ryan, Winnipeg.

**GENERAL SESSION**

Wednesday, June 25

10.45 a.m.

**Valedictory Address.**

Dr. Wallace Wilson, Vancouver.

**The Osler Lecture — Osler: The Textbook and Education in Medicine.**

Prof. J. M. McMichael, London.

**The Early Diagnosis of Carcinoma of the Stomach.**

Dr. Leo G. Rigler, Minneapolis.

**SECTIONAL MEETINGS**

Wednesday, June 25

2.15 p.m.

**Section of Anæsthesia****Combined Anaesthesia.**

Dr. R. Letienne, Winnipeg.

**Anæsthesia in Chest Surgery.**

Dr. J. A. Blezard, London.

**Regional Anaesthesia.**

Dr. John Carroll, Montreal.

**Pentothal Anaesthesia.**

Dr. Fernando Hudon, Quebec.

**Section of Dermatology****Treatment of Malignant Skin Tumours.**

Dr. George Brock, Winnipeg.

**The Xanthomatoses.**

Dr. Paul O'Leary, Rochester.

**Recent Advances in Dermatology.**

Dr. Harold Orr, Edmonton.

**Manifestations of Skin Sensitivity.**

Dr. G. S. Williamson, Ottawa.

**Skin Lesions of Functional Nervous Disease.**

Dr. D. E. H. Cleveland, Vancouver.



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**PROTEIN** milk, originally developed by Dr. Heinrich Finkelstein of Berlin, is now widely used in pediatrics.

Its favorable effect has been shown clinically in cases of fermentative and summer diarrhoea, acute intestinal intoxication, coeliac disease, and in the care of premature and newborn infants.

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## Section of Medicine

## Obscure Causes of Heart Failure.

Dr. Gerard Allison, Winnipeg.

## Diagnosis in Arthritis and Rheumatism.

Dr. Douglas Taylor, Toronto.

## Immunization Procedures in Acute Infections.

Dr. R. D. Defries, Toronto.

## Minor Ailments.

Dr. Charles Hunter, Winnipeg.

## Section of Ophthalmology

## Tributary Retinal Venous Thrombosis.

Dr. Robert M. Ramsay, Winnipeg.

## The Newer Types of Implants used after Enucleation.

Dr. J. S. Crawford, Toronto.

## The Diagnosis of Toxoplasmic Chorioretinitis.

Dr. Kenneth B. Johnston, Montreal.

## Vertical Deviations.

Dr. James McGillivray, Winnipeg.

## Section of Pædiatrics

## Congenital Heart Disease.

(a) Diagnosis—Dr. John Keith, Toronto.

(b) Surgical Approach—Dr. Gordon Murray, Toronto.

## Subdural Haematoma in Infants.

(a) Etiology and Diagnosis—Dr. Taylor Statten, Toronto.

(b) Surgical Approach—Dr. Arthur Elvidge, Montreal.

## Electro Encephalography in Paediatrics.

Dr. Harold Rice, Winnipeg.

## Section of Radiology

## The Value of Plain Abdominal Roentgenograms.

Dr. F. G. Stuart, Winnipeg.

## Radiation Treatment of Carcinoma of the Corpus Uteri.

Dr. Ethlyn Trapp, Vancouver.

## The Treatment of Angiomas.

Dr. Origene Dufresne, Montreal.

## Calcification in the Ascending Aorta as a Roentgen Sign of Luetic Aortitis.

Dr. R. A. MacPherson, Winnipeg.

## Section of Surgery

## A Follow-up of the Treatment of Intervertebral Discs.

Dr. H. F. Cameron, Winnipeg.

## Strictures of the Common Duct.

Dr. Warren H. Cole, Chicago.

## Results of Surgical Treatment of Bronchiectasis.

Dr. F. G. Kergin, Toronto.

## Intertrochanteric Fractures of the Femur, treated by Skeletal Fixation.

Dr. J. R. Naden, Vancouver.

Thursday, June 26

## ROUND TABLE CONFERENCES

9.00 - 10.30 a.m.

## Anæsthesia

## Anaesthesia for Chest Surgery.

Dr. A. C. Rumball, Winnipeg, Chairman.

Dr. J. D. Cameron, Toronto.

Dr. Marjorie Bennett, Winnipeg.

Dr. F. Walton, Winnipeg.

Dr. J. M. McKinnon, Winnipeg.

## Dermatology

## Furunculosis.

Dr. A. R. Birt, Winnipeg, Chairman.

Dr. K. A. Baird, Saint John.

Dr. Lennox G. Bell, Winnipeg.

Dr. B. Brachman, Regina.

Dr. Fred Cadham, Winnipeg.

Dr. J. W. R. Rennie, Winnipeg.

## Medicine, Obstetrics and Gynæcology

## Endocrine Problems of Gynaecology and Obstetrics.

Dr. J. S. Henry, Montreal, Chairman.

Dr. Willard Holmes, Saskatoon.

Dr. A. B. Nash, Victoria.

Dr. L. T. Armstrong, Toronto.

## Otolaryngology

## Chronic Otitis Media and Mastoiditis.

Dr. Robert Black, Winnipeg, Chairman.

Dr. Frank Macneil, Winnipeg.

Dr. T. J. Haughton, Regina.

Dr. G. M. T. Hazen, Saskatoon.

Dr. E. J. Washington, Winnipeg.

Dr. I. H. Beckman, Winnipeg.

## Psychiatry

## Child Psychiatry.

Dr. T. Alex Pincock, Winnipeg, Chairman.

Dr. G. M. Stephens, Winnipeg.

Dr. Brian Bird, Toronto.

Dr. C. G. Stogdill, Ottawa.

## Radiology

## Cardio-vascular Roentgenology.

Dr. H. M. Edmison, Winnipeg, Chairman.

Dr. A. E. Childe, Winnipeg.

Dr. L. R. Coke, Winnipeg.

Dr. F. A. L. Mathewson, Winnipeg.

Dr. Harry Medovy, Winnipeg.

## Surgery

## Vascular Disorders of the Lower Extremities.

Dr. C. E. Corrigan, Winnipeg, Chairman.

Dr. H. D. Kitchen, Winnipeg.

Dr. R. O. Burrell, Winnipeg.

Dr. J. W. R. Rennie, Winnipeg.

Dr. John Farr, Winnipeg.

## Urology

## Anuria.

Dr. H. D. Morse, Winnipeg, Chairman.

Dr. J. C. McClelland, Toronto.

Dr. Joseph Doupe, Winnipeg.

Dr. D. Nicholson, Winnipeg.



## They look to you, Doctor..

"The destruction of bacteria (disinfection) or interference with their activities (antiseptics) by chemical means is attempted daily in proceedings ranging between proved usefulness and utter futility."

Garrod, L.P. and Keynes, Geoffrey L. (1937) *Brit. Med. J.* 2, 1233.

IF SO FORTHRIGHT a reminder as this should have been addressed to the medical profession itself, how much more does the unskilled user of antiseptics — the ordinary householder — stand in need of guidance!

ALL ANTIBACTERIAL agents — whether for treatment or prevention — are in some degree selective. The choice of the antibiotic or chemotherapeutic substance for treating an established infection is a matter for your skill. But the choice of the antiseptic for preventive use in the home is a matter which calls clearly for your advice.

FOR GENERAL USE in unskilled hands, obviously the less selective agent is to be preferred.

NOW, it is one of the many advantages of 'Dettol' that it is rapidly lethal to a diversity of common pathogenic organisms; to haemolytic streptococci, to *Strep. pyogenes*, *Staph. aureus*, *B. coli*, *B. typhosum* and to such wound contaminants as *B. proteus* and *Ps. pyocyanea*. And

for all this low selectivity, 'Dettol' is non-toxic, highly bactericidal in the presence of blood, pus and other wound debris, pleasant in smell and non-staining to linen or the skin.

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**GENERAL SESSION****Thursday, June 26**

10.45 a.m.

**The Present Status of Penicillin in the Treatment of Syphilis.**

Dr. Paul O'Leary, Rochester.

**Intestinal Obstruction.**

Dr. Warren H. Cole, Chicago.

**Psychotherapy in Medical Practice.**

Dr. C. B. Farrar, Toronto.

**SECTIONAL MEETINGS****Thursday, June 26**

2.15 p.m.

**Section of Anæsthesia****Anæsthesia in Major Abdominal Surgery; a comparative study of continuous spinal and cyclopropane with curare.**

Dr. Gorothea M. Wardrop, Winnipeg.

**Oxygen Saturation of the Blood in Several Types of Anaesthesia.**

Dr. Stanley Campbell and

Dr. D. M. Bean, Toronto.

**Anæsthesia for Ophthalmic Surgery.**

Dr. E. H. Watts, Edmonton.

**Hypobaric Pontocaine Spinal Anaesthesia for Exploration for Extruded Nucleus Pulposus.**

Dr. Peere C. Lund, Winnipeg.

**Armed Forces Medical Section****The Field Surgical Unit.**

Dr. J. A. B. Hillsman, Winnipeg.

**Recent Advances in Aviation Medicine.**

Dr. W. R. Franks, Toronto.

**The Medical Aspects of Civil Defence.**

Dr. O. M. Solandt, Ottawa.

**Section of Medicine****The Role of Proteins in Management of Diabetes.**

Dr. A. Hollenberg, Winnipeg.

**The Treatment of Peptic Ulcer.**

Dr. A. H. Gordon, Montreal.

**Epilepsy, Tridione and results.**

Dr. C. A. Gauthier, Quebec.

**Enigmatic Anaemias.**

Dr. William Magner, Toronto.

**Section of Obstetrics and Gynæcology****Diabetes in Pregnancy.**

Dr. W. P. Tew, London.

**The Differential Diagnosis of Chronic Lower Abdominal Pain in the Adult Female.**

Dr. Brian D. Best, Winnipeg.

**Prolapse.**

Dr. L. T. Armstrong, Toronto.

**Blood Loss in Labour.**

Dr. George White, Saint John.

**Section of Otolaryngology****Epistaxis.**

Dr. J. K. M. Dickie, Ottawa.

**The Clinical Application of Penicillin in Otolaryngology.**

Dr. Keith Hutchinson, Montreal.

**Ménière's Disease, Diagnosis and Treatment.**

Dr. P. E. Ireland, Toronto.

**Synoptic History of a Series of Interesting Laryngeal and Oesophageal Cases.**

Dr. E. J. Washington, Winnipeg.

**Section of Radiology****Myelography—some Technical Considerations.**

Dr. Harold Morison, Winnipeg.

**Emphysema: An Early Sign of Bronchogenic Carcinoma.**

Dr. Leo R. Rigler, Minneapolis.

**The Relationship of Radiological Diagnosis to Radiotherapy in the Treatment of Carcinoma of the Breast.**

Dr. W. A. Jones, Kingston.

**Roentgen Therapy in Carcinoma of the Vulva.**

Dr. Jean Bouchard and

Dr. Carleton B. Peirce, Montreal.

**Pneumoarthrography of the Knee Joint.**

Dr. Paul P. Hauch, London.

**Section of Surgery****Carcinoma of the Left Colon.**

Dr. Donald Campbell, Hamilton.

**Early Diagnosis of Subdiaphragmatic Abscess by Artificial Pneumoperitoneum.**

Dr. A. L. Wilkie, Montreal.

**Spontaneous Uterine Rupture.**

Dr. Christophe Bisson, Montreal.

**Dupuytren's Contracture: Review of 100 Operations.**

Dr. Robert G. Langston, Vancouver.

**Section of Urology****Essential Haematuria.**

Dr. D. R. Mitchell, Toronto.

**Renal Cysts.**

Dr. R. E. Powell, Montreal.

**Sarcoma of the Kidney.**

Dr. L. G. Wood, Vancouver.

**Wilms' Tumours (review of cases).**

Dr. Gordon Ellis, Edmonton.



# HEADLINE NEWS FOR TRAVELERS

War-time studies<sup>1-4</sup> conducted by the medical corps of the United States Navy, the British Royal Navy, Air Force personnel and other investigators have established hyoscine (scopolamine), the major drug in

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as the best single agent for the prevention and treatment of seasickness and airsickness. VASANO for travel sickness is now available to civilian practice offering the relief demonstrated by the Armed Forces. VASANO is supplied in two forms, tablet and suppository. The recommended adult dose is supplied by two tablets or one suppository administered 1 to 2 hours before departure. This may be repeated in 3 to 4 hours.

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Trade-Mark VASANO—Reg. U. S. Pat. Off.

1. Holling, H. E.; McArdle, B., and Trotter, W. R.: *Lancet* 1:127, 1944.
2. Hill, I. G. W., and Guest, A. I.: *Brit. M. J.* 2:6, 1945.
3. A Critical Study of Seasickness Remedies, No. 4, Royal Naval Medical Bulletin 24:3, 1943, abstracted, *Bulletin of War Medicine* 18:1242, 1944.
4. Lillienthal, J. L.: *J. Aviation Med.* 16:59, 1945.



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Friday, June 27

## ROUND TABLE CONFERENCES

8.00 - 10.30 a.m.

## Dermatology

## Ringworm of the Scalp.

- Dr. A. M. Davidson, Winnipeg, Chairman.  
 Dr. Arthur Birt, Winnipeg.  
 Dr. G. O. Williamson, Ottawa.  
 Dr. Harold Orr, Edmonton.  
 Dr. Norman Wrong, Toronto.  
 Dr. D. E. H. Cleveland, Vancouver.

## Medicine

## The Management of Peptic Ulcer.

- Dr. J. Wendell Macleod, Winnipeg, Chairman.  
 Dr. Malcolm Brown, Kingston.  
 Dr. R. F. Farquharson, Toronto.  
 Dr. M. B. Perrin, Winnipeg.  
 Dr. C. C. Ross, London.  
 Dr. F. H. T. Thorlakson, Winnipeg.  
 Dr. J. H. Geddes, London.  
 Dr. R. M. MacDonald, Boston.

## Obstetrics and Pædiatrics

## The Rh Factor in Obstetrics and Paediatrics.

- Dr. Bruce Chown, Winnipeg, Chairman.  
 Dr. Ronald Denton, Montreal.  
 Dr. Ross Vant, Edmonton.  
 Dr. Gordon Ceghlin, Winnipeg.

## Psychiatry

## Electro Encephalography in Psychiatry.

- Dr. G. L. Adamson, Winnipeg, Chairman.  
 Dr. John Kershman, Montreal.  
 Dr. Harold V. Rice, Winnipeg.  
 Dr. L. D. Proctor, Toronto.

## Surgery

## Management of Intestinal Obstruction.

- Dr. M. R. MacCharles, Winnipeg, Chairman.  
 Dr. J. C. Armour, Montreal.  
 Dr. A. D. McLachlin, London.  
 Dr. R. A. Macpherson, Winnipeg.

## Urology

## The Role of Antibiotics and Chemotherapy in Urology.

- Dr. J. C. McClelland, Toronto, Chairman.  
 Dr. D. R. Mitchell, Toronto.  
 Dr. C. M. Spooner, Toronto.  
 Dr. D. Swartz, Winnipeg.

## GENERAL SESSION

Friday, June 27

10.45 a.m.

## Medical Implications of Recent Developments in Atomic Physics.

- Dr. A. Cipriani, Chalk River.  
**Pre- and Post-operative Management of Gastro-intestinal Cases.**

Dr. Roscoe R. Graham, Toronto.

## Some Practical Aspects of Recent Advances in Obstetrics and Gynaecology.

Dr. A. B. Nash, Victoria.

## SECTIONAL MEETINGS

Friday, June 27

2.15 p.m.

## Armed Forces Medical Section

## Glimpses of the R.C.A.M.C. in Action.

Dr. Athol Gordon, Winnipeg.

## The Sequelae of Local Exposure to Cold.

Dr. D. R. Webster, Montreal.

## Operation Crossroads (The Bikini Experiment).

Major General R. M. Luton, Ottawa.

## Section of Historical Medicine

## Milestones in Canadian Medicine.

Dr. Heber Jamieson, Edmonton.

## Doctor C. E. Smythe, Pioneer Physician of Medicine Hat.

Dr. G. D. Stanley, Calgary.

## A Boy's Eye View of the Doctors He Knew, 1889 to 1896.

Dr. M. H. V. Cameron, Toronto.

## Jeanne Mance.

Dr. H. E. MacDermot, Montreal.

## Bucke's Travels.

Dr. Edwin Seaborn, London.

## Section of Industrial Medicine

## Workmen's Compensation.

Dr. D. J. Fraser, Winnipeg.

## Accident Proneness.

Dr. G. E. Hobbs, London.

## Organization and Experience of a Large Industrial Medical Department.

Dr. K. E. Dowd, Montreal.

## Diagnosis and Management of Silicosis.

Dr. William Taylor, Timmins.

# CASE HISTORY No. 1...



**Report on the Clinical Use of Bone Meal...**

... "a six year old child with a grave defect in his dentition and complaining bitterly of pains in his legs was given a brand of decalcium phosphate with vitamin D in ten grain doses twice a day. There was no weight gain and much restlessness... the little chamber he used at night was becoming encrusted with calcium deposit... he was getting very little absorption of the calcium.

"It occurred to us that if we gave bone meal to calves and young animals why shouldn't nature's own combination of bone minerals be completely utilized by any animal body? We sifted and pulverized available bone meal and filled 10 grain capsules. In one week the child was playing as hard as any of his school-mates. There was no more excess calcium deposit, although he was getting three 10 grain capsules daily. He made steady progress in the three years in which we had him under observation and his secondary growth teeth were sound."

*See article reprinted in Canadian Medical Journal, June 1944, Vol. 50. (E. M. Martin, M.D.)*

Each Osteocap and Osteotab contains purified select bone flour 7½ grains, vitamin A (1000 I.U.) and vitamin D (500 I.U.)

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## Section of Medicine

### Symposium—Recent Advances in Therapeutics.

Chairman and leader of discussion—  
Dr. Ray Farquharson, Toronto.

Antibiotics—Dr. S. R. Townsend, Montreal.

Thiouracil—Dr. John M. Kilgour, Winnipeg.

Anticoagulants—Dr. E. S. Mills, Montreal.

Antihistamine and Related Substances—  
Dr. C. H. A. Walton, Winnipeg.

Folic Acid—Dr. Ray Farquharson, Toronto.

Nitrogen Mustards, B.A.L., etc.—

Dr. Athol Gordon, Winnipeg.

## Section of Obstetrics and Gynæcology

### Conduct of Trial of Labour.

Dr. A. W. Andison, Winnipeg.

### Malignancy of the Vulva.

Dr. J. A. Brown, Regina.

### The Management of Dysmenorrhoea.

Dr. J. O. Baker, Edmonton.

## Section of Pædiatrics

### Coeliac Disease.

Dr. F. W. Wigglesworth, Montreal.

### Milk Allergy.

Dr. B. C. Browne, Fort William.

### Infantile Diarrhoea.

Dr. Murray McLandress, Winnipeg and

Dr. Maurice Berger, Winnipeg.

## Section of Psychiatry

### Functional Disorders of the Gastro-Intestinal System.

Dr. J. Wendell Macleod, Winnipeg.

### Somatic Symptoms in the Psychoses.

Dr. Edward Johnson, Selkirk.

### The Treatment of Psychosomatic Disorders.

Dr. Trevor Owen, Toronto.

### Mental Hygiene Related to Psychosomatic Disorders.

Dr. George H. Stevenson, London.

## Section of Surgery

### Repair of Bony Defects of the Face and Jaws.

Dr. E. W. Pickard, Winnipeg.

### Present Day Treatment of Hyperthyroidism.

Dr. Walter MacKenzie, Edmonton.

### The Treatment of Perforated Peptic Ulcer.

Dr. D. L. C. Bingham, Kingston.

### The Present Status of Vagus Section in Ulceration of the Stomach and Duodenum.

Dr. E. Bruce Tovee, Chicago.

## Section of Urology

### Ureteritis.

Dr. Earl Hall, Vancouver.

### Repair of Postoperative Urinary Fistula of Unusual Type.

Dr. Hilton S. Good, Regina.

### The Urologist and the General Practitioner.

Dr. W. P. Hogarth, Fort William.

### Diverticula of the Bladder with case reports.

Dr. N. B. Berry, Kingston.

### Consideration of Infected Bilateral Renal Calculi.

Dr. Albert G. Laroche, St. Hyacinthe.

## Special Exhibit

### Department of Veterans' Affairs

The Department of Veterans' Affairs have made arrangements to have both fixed and special scientific exhibits to be on display June 24, 25 and 26 at the Deer Lodge Hospital. Special exhibits will be at stated hours which will be announced later. Included in these exhibits will be Dermatology, Tropical Diseases, Parasitology, Orthopaedic Cases, Paraplegic Cases and Rehabilitation Exercises.

Special arrangements will be made for transportation from the Convention Headquarters to the Hospital.

## The Manitoba Division

The Manitoba Division will hold its annual business meeting on Tuesday afternoon, June 24.

## Canadian Cancer Society

The Grand Council of the Canadian Cancer Society will meet in the Royal Alexandra Hotel, Winnipeg, on Saturday, Sunday and Monday, June 21, 22 and 23, commencing at 9.30 a.m.

## Royal College of Physicians and Surgeons of Canada

The Royal College of Physicians and Surgeons of Canada will hold the following meetings in the Royal Alexandra Hotel, Winnipeg:

### Monday, June 23

11.00 a.m.—Meeting of the Executive Committee.

### Tuesday, June 24

9.00 a.m.—Meeting of Council, continuing all day and during the evening.



# A Hearty Welcome is Extended to You . . .

FISHER & BURPE LIMITED extend to the Medical Profession a hearty welcome to visit their display booths, 25, 26, 27, 28 and 29, at the Canadian Medical Association Meeting, in the Gold Room of the Royal Alexandra Hotel, WINNIPEG, on June 23rd, 24th, 25th, 26th and 27th, 1947.

Our Exhibit will include Equipment and Specialties from the following leading manufacturers:

- Hamilton Medical Furniture
- Burdick Physical Medicine Equipment.
- Cambridge Electrocardiograph and Stethograph Equipment
- Heidbrink Gas Oxygen Apparatus
- Jones Motor-Basal Metabolism Unit
- Stille (Made in Sweden) Surgical Instruments
- Scanlan-Morris Operating Tables and Lighting Equipment
- Baumontometers
- Gomco Thermotic Drainage Apparatus
- Bard Urological Instruments
- Pilling Bronchoscopic Esophagoscopic Instruments
- Koagamin Blood Coagulant
- Tarbonis Cream
- Steri-Cold Germicide
- Leitz Photo-Electric Colorimeter and Haemoglobinometers
- General Physicians' Supplies and Specialties

On display for your inspection will be Medical and Surgical apparatus of the most modern designs, embodying innovations, many of which will be shown in Winnipeg for the first time. Experienced technicians will gladly demonstrate them for you.

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**The Canadian Society of Allergists****Tuesday, June 24****9.00 a.m.—Round Table Discussion.****Asthma in Adults and Children.**

Dr. H. K. Detweiler (President), Toronto.

Dr. A. T. Henderson, Montreal.

Dr. C. H. A. Walton, Winnipeg.

Dr. J. R. Ross, Toronto

**11.00 a.m.—Business Meeting.****2.00 p.m.—Scientific Session:****Bacterial Allergy.**

Dr. K. A. Baird, Saint John.

**Histamine.**

Dr. Bram Rose, Montreal.

**Antihistamine Drugs.**

Dr. A. T. Henderson, Montreal.

**Bronchoscopy and Bronchial Asthma.**

Dr. S. McEwen, Winnipeg.

**The Use of Slowly Absorbed Pollen Extracts in the Treatment of Hay Fever in Children.**

Dr. J. R. Ross, Toronto.

**Periarthritis Nodosa.**

Dr. I. H. Erb, Toronto.

**The Canadian Anaesthetists' Society**

The fifth Annual Meeting of the Canadian Anaesthetists' Society will be held on Wednesday, June 25, immediately after the session of the Section of Anaesthesia under whose auspices all scientific meetings are being held. The agenda will include the election of officers and a discussion of tariffs, certification, post-graduate education and any new business presented by members. Following this, the annual reunion and dinner will be held from 5.30 to 8.30 o'clock. On Thursday, June 26, business meetings of the various Provincial Divisions will convene at 4.30 p.m.

**Canadian Heart Association**

An organization meeting of a Canadian Heart Association will be held on Tuesday afternoon, June 24, commencing at two o'clock. All cardiologists are urged to be present. Following the business session, Dr. John England will give an address on "The Circulation in Arteriovenous Aneurysms."

**The Canadian Orthopaedic Association****L'Association Canadienne D'Orthopédie**

The third annual meeting of the Canadian Orthopaedic Association will be held in the Royal Alexandra Hotel, Winnipeg, on Monday and Tuesday, June 23 and 24.

**Monday, June 23****9.00 a.m.****Traumatic Lesions of the Posterior Tarsus.**

Dr. W. B. MacKinnon, Winnipeg.

**Fusion of the Ankle Joint.**

Dr. J. A. Leo Walker, Montreal.

**Recurrent Subluxation of the Ankle.**

Dr. Geo. F. Pennal, Toronto.

**Spondylolisthesis.**

Dr. R. I. Harris, Toronto.

**Giant Cell Tumour of the Sacrum.**

Dr. L. P. Roy, Quebec.

**12 noon—Business Meeting.**

Members only.

**2.00 p.m.****High Osteotomy in Femoral Neck Non-union.**

Dr. R. G. Townsend, Calgary.

**Observation on Methods of Pinning Hips.**

Dr. Beattie Martin, Regina.

**Reduction and Fixation of Femoral Neck Fractures Under Fluoroscopic Control.**

Dr. G. H. Ryan, Winnipeg.

**Tuesday, June 24****9.00 a.m.****Fusion of the Wrist Joint.**

Dr. A. A. Butler, Montreal.

**A Case of Spondylitis of Proved Etiology Treated by Streptomycin.**

Dr. Roger Gariepy, Montreal.

**Repair of Shoulder Capsule Lesion.**

Dr. D. E. Starr, Vancouver.

**Late Results in Knee Arthroplasty.**

Dr. J. E. Samson, Montreal.

**Bilateral Congenital Pseudoarthrosis of Clavicles.**

Dr. J. C. Rossignol, Ottawa.

**2.00 p.m.****Early and Late Treatment of Slipped Femoral Epiphysis.**

Dr. Antonio Samson, Montreal.

Dr. Leo Jarry, Montreal.

**Stabilization of the Paralytic Foot.**

Dr. Ulric Frenette, Montreal.

**Scapular Transplant in Abductor Paralysis of the Shoulder.**

Dr. J. E. Bateman, Toronto.

**Patellectomy.**

Dr. H. M. Coleman, Toronto.

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### The Alberta University Medical Alumni

The Alberta University Medical Alumni will hold a dinner at the Fort Garry Hotel, Winnipeg, on Thursday, June 26, commencing at 6.30 p.m. All interested are invited.

### The Canadian Medical Protective Association

The Canadian Medical Protective Association will meet at 4.30 p.m. on Wednesday, June 25.

### The Canadian Association of Radiologists

The Canadian Association of Radiologists will meet in the Royal Alexandra Hotel on the afternoon and evening of Tuesday, June 24.

### The Federation of Medical Women of Canada

The Council of the Federation of Medical Women of Canada will meet on Tuesday evening, June 24. The Annual Meeting will take the form of a breakfast at 8.30 a.m. on Wednesday, June 25, at the Business and Professional Women's Club, 3 Evergreen Place. Following the breakfast there will be a business session.

### The Canadian Urological Association

The Canadian Urological Association will meet on Thursday, June 26 at the conclusion of the afternoon session of the Section of Urology.

### Registrars of the Colleges of Physicians and Surgeons

Registrars of the Colleges of Physicians and Surgeons of Canada will meet at 2.00 p.m. on Thursday, June 26.

### Canadian Dermatological Association First Annual Meeting

The First Annual Meeting of the Canadian Dermatological Association will be held on Tuesday, June 24th, Deer Lodge Hospital, at 10.00 a.m. Exhibits:

Fungus Diseases of the skin in Manitoba.

Fluorescence in Diagnosis of Skin Diseases.

#### Motion Picture:

Scabies—Motion Picture film of Scabies, loaned by British Ministry of Information.

#### Time Table:

10.00 a.m. Clinical Session.

12.30 p.m. Luncheon at Deer Lodge Hospital.

2.00 p.m. Business Meeting followed by Drive to Lower Fort Garry for afternoon.

6.00 p.m. Dinner.

### Ladies' Golf

The Committee in charge is anxious to have as many entries as possible for the tournament which will be held during the week of the Canadian Medical Association meeting, June 23rd to 27th. Entries will be accepted at the Ladies' Registration Desk at the Royal Alexandra Hotel. Many valuable prizes are available. One trophy, a cup donated by a local firm for annual competition, will be awarded to the winner of the 18-hole handicap round to be played on the course of the St. Charles Country Club on the morning of Friday, June 27th. Lunch will be served at the conclusion of the event.

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## Department of Health and Public Welfare

### Comparisons Communicable Diseases — Manitoba (Whites and Indians)

DISEASES	1947		1946		TOTALS	
	Mar. 23 to Apr. 19, '47	Feb. 23 to Mar. 22, '47	Mar. 23 to Apr. 20, '46	Feb. 24 to Mar. 23, '46	Dec. 29, '46 to Apr. 19, '47	Dec. 30, '45 to Apr. 20, '46
Anterior Poliomyelitis	0	0	0	0	0	1
Chickenpox	80	82	65	87	369	456
Diphtheria	9	7	20	15	38	71
Diphtheria Carriers	2	1	0	3	8	7
Dysentery—Amoebic	0	0	0	0	0	1
Dysentery—Bacillary	0	0	0	0	1	1
Erysipelas	2	3	8	4	16	35
Encephalitis	0	1	0	0	1	0
Influenza	17	3	21	55	36	142
Measles	1193	1628	65	25	4472	142
Measles—German	8	6	8	1	18	11
Meningococcal Meningitis	1	1	1	4	6	5
Mumps	201	310	356	367	862	995
Ophthalmia Neonatorum	0	0	0	0	0	0
Pneumonia—Lobar	18	8	20	13	67	73
Puerperal Fever	0	1	0	0	0	0
Scarlet Fever	17	12	53	81	79	246
Septic Sore Throat	1	3	3	8	7	19
Smallpox	0	0	0	0	0	0
Tetanus	1	0	0	0	1	0
Trachoma	0	0	0	0	0	0
Tuberculosis	87	81	114	62	220	259
Typhoid Fever	0	0	2	2	0	6
Typhoid Paratyphoid	0	0	0	0	0	0
Typhoid Carriers	0	1	2	0	2	2
Undulant Fever	0	0	1	3	1	7
Whooping Cough	83	89	36	25	305	111
Gonorrhoea	151	163	178	205	646	755
Syphilis	48	35	57	53	178	226
Diarrhoea and Enteritis, under 1 yr.	11	6	18	15	35	55

Four-Week Period Report, March 23 to April 19, 1947

DISEASES	Manitoba	Ontario	Saskatchewan	Minnesota
(White Cases Only)				
Approximate population.	*718,699	*3,825,000	*905,000	*2,962,000
Anterior Poliomyelitis	1	1	2	
Chickenpox	80	1104	71	
Diphtheria	9	10	2	14
Diphtheria Carriers	2			
Dysentery—Amoebic		6		9
Dysentery—Bacillary		1		
Erysipelas	2	3	3	
Influenza	17	77		20
Jaundice—Infectious		19		
Leth. Enceph.		1		
Measles	1193	436	288	452
Measles—German	8	177	34	
Meningococcal Meningitis	1	4	1	10
Mumps	201	2121	494	
Pneumonia—Lobar	18			
Scarlet Fever	17	305	13	160
Septic Sore Throat	1	3	3	
Tetanus	1			
Tuberculosis	87	98	35	10
Typhoid Fever		9		2
Typh. Para-Typhoid		1		
Undulant Fever		12		5
Whooping Cough	83	338	5	56
Gonorrhoea	151	233		
Syphilis	48	183		

### DEATHS FROM COMMUNICABLE DISEASES

#### For 3-Week Period April 1 to April 22, 1947

**Urban**—Cancer, 50; Influenza, 2; Pneumonia, Lobar, 6; Pneumonia (other forms), 5; Puerperal Septicaemia, 1; Syphilis, 4; Tuberculosis, 6; Diarrhoea and Enteritis (under 2 years), 1; Hydatid Disease, 1; Hodgkin's Disease, 1; Disease of teeth and gums, 1; Disease of skin, 1. Other deaths under 1 year, 25. Other deaths over 1 year, 192. Stillbirths, 14. Total, 231.

**Rural**—Cancer, 21; Influenza, 7; Measles, 1; Pneumonia, Lobar, 7; Pneumonia (other forms), 9; Tuberculosis, 11; Diarrhoea and Enteritis (under 2 years), 2; Septicaemia, 1. Other deaths under 1 year, 20. Other deaths over 1 year, 154. Stillbirths, 11. Total, 185.

**Indians**—Influenza, 2; Pneumonia (other forms), 6; Tuberculosis, 2. Other deaths under 1 year, 3. Other deaths over 1 year, 6. Stillbirths, nil. Total, 9.

♦  
**Measles and Mumps** have apparently passed their epidemic peaks for this year and are on the decline.

**Scarlet Fever**—The new scarlet fever streptococcus toxin (tannic acid precipitated) for **intradermal** inoculation against scarlet fever has now been announced as available by the Connaught Research Laboratories. It is given in three doses of 0.1 c.c. each at intervals of two to three weeks. Each package contains 3 vials (A, B and C strengths) sufficient for the immunization of from one to ten persons at one time. Instructions are contained in each package—read them carefully before administering the toxin. The old toxin, to be given subcutaneously, is still available (A, B, C, D and E strengths) in one person and six person packages if you prefer to use it.



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Doctors will find Nivea Creme especially useful for keeping their hands in good condition. A little massaged into the hands after operating counteracts the dryness of skin that results from constant "scrubbing up" and contact with antiseptic solutions.

Nivea is also a useful corrective measure in cases where disease has left the skin scaly and irritated, and it is an excellent cleansing medium when soap and water is contra-indicated.

Nivea Creme is a water-in-oil emulsion containing Eucerite, a mixture of solid alcohols closely related chemically to the fatty substances present in skin secretions. It penetrates the epidermis and replenishes any deficiency of the skin's natural fatty elements.

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## Manitoba Medical Service

Many and important changes will take place in this organization during the next few months, and a great deal of work is being done by the Board, committees and officers of which you are probably aware. We are moving to a building which is nearing completion on Portage Avenue East. Circumstances have compelled us to assume obligation for a whole floor, covering over 5,000 square feet. We do not at present require more than half this amount; some of the balance has been let, and it is hoped that the rest will be taken before the building is ready for occupation. Should we expand in the future there will be ample room available. We have to do everything in the way of electrical wiring, floor covering, partitions, etc., for the whole floor, and the costs run into many thousands of dollars. In addition many expensive machines have to be purchased for billing and recording. Over 18,000 subscribers either in groups or bill direct have to be notified monthly, and lists sent where there is payroll deduction. Doctors have to get a statement once a month showing how their cheques are made up. Once a year we have to meet the demands of income tax-payers, which means a roll covering each individual in a family, each illness, and the name of the doctor in attendance with the amount charged by him. This year about nine thousand of these had to be provided, which seriously disrupted our administrative services.

There is also another form of re-organization taking place which requires your assistance and co-operation. To prepare for it the enrolment department was instructed to make no further contracts for the "B" Plan at and after June 2nd, 1947, and negotiations entered into before that date must be completed by the 1st of June. At the moment the public appears to be rather uneasy, fearing that we may not make any further contracts; they are being told that the whole matter is under consideration, and until a decision is reached no opinion can be given.

The important questions are what do you want, and is what you want compatible with what the public can or will give?

Our recent Chairman, Dr. M. R. MacCharles stated very clearly that the public and the doctors were given blank cheques. At the end of a two-year period you know that it will not work. Many of you complain about the present system so the opportunity presents itself for you to make suggestions. There are certain angles to be considered and I shall try to tell you a few of them. A very large percentage of our community want the "B" Plan; a certain proportion of these abuse it; when checked up, we are told that it

is not made clear what privileges are available. Michigan has about 800,000 subscribers all on the "A" Plan, and many other U.S.A. Medical Services are similar. It is, I believe, good business to sell people what they want, and our citizens prefer the "B" Plan.

Plan "B" will work but only if restrictions and regulations governing both doctors and patients are incorporated.

Scrapping the "B" Plan will have the following repercussions. A very large group both among specialists and general practitioners is going to be affected because home and office calls will be excluded. Many cases of minor surgery will be sent into hospital since it will cost the patient nothing, and the doctor will receive a fee; the 'congestion in hospitals will be increased.

It is scarcely likely that the "A" Plan will escape having extras added in the way of concessions to certain groups. On our present "A" Plan pre-natal and post-natal examinations in the office are provided. Anaesthetists are paid for emergency cases in hospitals; X-rays of injuries in the practitioners office; minor operations or examinations done in the casualty department of a hospital; seventy-five per cent of a fracture where immobilization is done in the casualty department. Would it be possible to prevent an extension of these borderline cases, which are now being paid?

Don't imagine that the public would accept calmly but with regret the fact that the profession could no longer provide a complete service. The reaction would be that one could not expect doctors to be able to administer such a plan; the public has learned the value of a prepayment plan and will not return willingly to a condition where it cannot protect itself against high costs of emergency surgery, accidents or catastrophic illness. It has come to me quite unofficially that a commercial firm will gladly take over our plan. The firm knows that we have done the spade work in teaching the public the value of such a service; and once in possession of our list of groups and subscribers no time would be lost in canvassing; only those would be approached who had been receptive to prepayment service.

Secondly, a group or clinic of thirty to forty doctors could handle this plan; they could not and would not work on the fee basis that we do; neither would they provide the service, but they would satisfy the demands of the public. There are many such plans in existence on this continent and very successful ones too. In Canada we have the Associated Medical Services in Toronto. It came into being ten years ago as a non-profit corporation without share capital. It is not con-



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                                  10% Safrole  
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led by organized medicine. It has now about 100 subscribers and a reserve of \$625,000.00. So see it has been done, and could be done here. ve it with you. It is likely that your June cheques may be ayed. When the financial statement is ready as to be examined by the Finance Committee

and recommendations made to the Board; the latter if satisfied gives instructions that cheques are to be prepared and issued. It is very unlikely that a quorum for the Board meeting could be assembled before the Canadian Medical Association meeting is over.

E. S. Moorhead, M.B.

## Manitoba Medical Service

### Balance Sheet at December 31st, 1946

#### Assets

CASH AT BANK	
Current Account	\$ 22,312.32
(Available to meet operating expenses)	
CASH ON HAND	50.00
ACCOUNTS RECEIVABLE	
Manitoba Hospital Service Association	\$28,778.38
(December collections paid over in January)	
Subscriptions in process of collection	16,727.61
	45,505.99
FURNITURE, FIXTURES AND OFFICE EQUIPMENT	1.00
	\$ 67,869.31

#### Liabilities and Reserve

ACCOUNTS PAYABLE	
Accounts of Medical Members	\$47,440.51
(Accounts for services given in December)	
Sundry Accounts Payable	3,485.03
(Payable in January)	\$ 50,925.54
DEFERRED INCOME	
Unearned Subscriber payments	7,441.16
DEFERRED LIABILITIES	
Manitoba College of Phys. and Surg.	\$ 4,000.00
Manitoba Medical Association	800.00
Winnipeg Medical Society	400.00
	5,200.00
RESERVE	
Excess of Income over Expenses for Year—Statement II	\$ 8,859.97
Less: Debit balance at 31st Dec., 1945	4,557.36
	4,302.61
	\$ 67,869.31

## Statement of Income and Expenses

### For the Year Ended 31st December, 1946

INCOME	
Earned Subscriptions	\$364,385.59
Sundry	1,976.03
	\$366,361.62
EXPENSES	
Accounts of Subscribers and Dependents	\$457,803.43
Less Amounts absorbed by Medical Members of the Service	148,471.81
	\$309,331.62
Administration fee paid to Manitoba Hospital Service Association	28,916.00
Operating Expenses	18,879.30
Furniture, Fixt. and Office Equipment	374.73
	357,501.65
EXCESS OF INCOME OVER EXPENSES	
Carried forward to Statement I	\$ 8,859.97

Approved on behalf of the Board of Trustees:  
W. G. BEATON, M.D.

## Auditors' Report

To the Board of Trustees,  
Manitoba Medical Service,  
Winnipeg, Manitoba.

We have audited the books of the Manitoba Medical Service for the year ended 31st December, 1946, and we report that we have obtained all the information and explanations we have required and that, in our opinion, the above Balance Sheet and accompanying Statement of Income and Expenses are properly drawn up so as to exhibit a true and correct view of the Service's affairs at 31st December, 1946, and the results of its operations for the year then ended, according to the best of our information and the explanations given, and as shown by the books of the Service. All the transactions of the Service that have come within our notice have been within the objects and powers of the Service, to the best of our information and belief.

GEORGE A. TOUCHE & CO.,  
Chartered Accountants,  
Auditors.

Winnipeg, 6th March, 1947.

## Membership as at 31st December, 1946

Subscribers, 16,185, Dependents, 19,604,  
Total Participants, 35,789

## Officers of the Board

M. R. MacCharles, M.D., Chairman. Mr. J. B. Richardson,  
Vice-Chairman. C. W. Clark, M.D., Secretary.  
W. G. Beaton, M.D., Treasurer.  
E. S. Moorhead, M.B., Medical Director.

## Medical Group Reports Loss

Courtesy Free Press, April 14th, 1947.

The Manitoba Medical service operated at a loss of \$148,471 during 1946 which was absorbed by medical men of the province according to Dr. Digby Wheeler, treasurer, in submitting the financial statement of the service for the past year.

The service is designed to give full payment of the doctor's bill for care and treatment supplied by a medical member to the family subscriber whose average yearly earnings are under \$3,000, and a proportion for those in higher brackets.

The service is still in the experimental stage, Dr. Wheeler pointed out, and nearly 36,000 persons are participating. These include 16,185 subscribers and 19,604 dependents.

Members of the service had accounts to \$457,803.43 during 1946 of which \$309,331.62 was paid by the service.

Total income of the service amounted to \$366,361.62 during the year of which \$364,335.59 was earned subscriptions and sundry accounts of \$1,976.03.

## College of Physicians and Surgeons of Manitoba

## Registration Committee

A meeting of the Registration Committee was held in the Registrar's Office, 605 Medical Arts Bldg., Winnipeg, at 1.00 o'clock P.M., on Thursday, November 28, 1946.

Members present—Drs. W. G. Campbell, H. Bruce Chown and C. B. Stewart.

### 1. Consideration of the Application for Registration of Dr. George Ball Elliott.

Dr. George Ball Elliott graduated from the University of Durham with the degrees of M.B., B.S., in 1940. He registered with the General Medical Council of Great Britain in 1940. He has also received the diplomas of M.R.C.S., England, and L.R.C.P., London. A Basic Science Credit Certificate accompanied his application.

#### Motion:

Moved by Dr. H. Bruce Chown, Seconded: "That Dr. George Ball Elliott's application for registration be accepted." Carried.

### 2. Consideration of the Application for Registration of Dr. Maxwell Theodore Macfarland.

Dr. Maxwell Theodore Macfarland received a B.A. degree from Queen's University in 1928. He received the degrees of M.C., C.M., from Queen's University in 1930, and registered with the Medical Council of Canada in 1930. A Basic Science Credit Certificate accompanied his application. Dr. Mac-

farland is the permanent secretary of the M.M.A.

#### Motion:

Moved by Dr. H. Bruce Chown, Seconded by Dr. C. B. Stewart: "THAT Dr. Maxwell Theodore Macfarland's application for registration be accepted." Carried.

### 3. Consideration of the Application for registration of Dr. James Lake Asselstine.

Dr. James Lake Asselstine received his M.D. degree from the University of Toronto in 1944 and registered with the Medical Council of Canada the same year. A Basic Science Credit Certificate accompanied his application.

#### Motion:

Moved by Dr. H. Bruce Chown, Seconded by Dr. C. B. Stewart: "THAT Dr. James Lake Asselstine's application for registration be accepted." Carried.

### 4. Consideration of the Application for Registration of Dr. Mary Mima Harrison.

Dr. Mary Mima Harrison graduated from Durham University with the degrees of M.F., B.S., in 1944. She registered with the General Medical Council of Great Britain in 1944. A basic Science Credit Certificate accompanied her application.

#### Motion:

Moved by Dr. H. Bruce Chown, Seconded by Dr. C. B. Stewart: "THAT Dr. Mary Mima Harrison's application for registration be accepted."



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